

Massachusetts Acute Care Hospital Emergency Department Data

FFY 2016-2019

September 2021



Table of Contents

Executive Summary	4
Section 1: Introduction	7
Characteristics of Massachusetts Hospitals with Emergency Departments, 2019	9
Massachusetts Emergency Department Campuses, 2019	10
Metro Boston Emergency Department Campuses, 2019	11
Section 2: Statewide Visit Characteristics and Utilization	12
Visit Utilization Overview, 2016-2019	14
Visits by Hospital Cohort, 2016-2019	15
Visits by System Affiliation, 2016-2019	16
Visits by High Public Payer Status, 2016-2019	17
Visits by Trauma Designation, 2016-2019	18
Visits by Expected Primary Payer Type, 2016-2019	19
Visits by Patient EMS Region, 2019	20
Visits by Expected Primary Payer Type and Patient EMS Region, 2019	21
Visits by Age Group, 2016-2019	22
Visits by Gender, 2016-2019	23
Visits by Age Group and Gender, 2019	24
Visits by Expected Primary Payer Type and Age Group, 2019	25
Visits by Race/Ethnicity, 2016-2019	26

Table of Contents (continued)

Section 3: Behavioral Health	27
Visits with Behavioral Health Primary Diagnoses, 2016-2019	29
Visits with Behavioral Health Primary Diagnoses by Expected Primary Payer Type, 2019	30
Visits with Behavioral Health Primary Diagnoses by Patient EMS Region, 2019	31
Visits with Behavioral Health Primary Diagnoses by Age Group, 2019.	32
Visits with Behavioral Health Primary Diagnoses by Gender, 2019	33
Visits with Behavioral Health Primary Diagnoses by Race/Ethnicity, 2019	34
Section 4: Frequent Utilizers	35
Patients and Visits by Frequent Utilizer Status, 2019	36
Patients and Visits by Frequent Utilizer Status and Expected Primary Payer Type, 2019	37
Patients and Visits by Frequent Utilizer Status and Patient EMS Region, 2019	38
Patients and Visits by Frequent Utilizer Status and Age Group, 2019	39
Patients and Visits by Frequent Utilizer Status and Gender, 2019	40
Patients and Visits by Frequent Utilizer Status and Race/Ethnicity, 2019	41
Section 5: Treat-and-Release Visit Characteristics and Utilization	42
Treat-and-Release Visits: Utilization Overview, 2016-2019	44
Treat-and-Release Visits: Departure Status, 2016-2019.	45
Treat-and-Release Visits: Most Common Primary CCSR Diagnoses, 2019	46
Treat-and-Release Visits: Length of Stay among Most Common Primary CCSR Diagnoses, 2019	47

Table of Contents (continued)

Treat-and-Release Visits: Most Common Non-Behavioral Health and Behavioral Health Primary CCSR Diagnoses, 2019.	48
Treat-and-Release Visits: Length of Stay among Most Common Non-Behavioral Health and Behavioral Health Primary CCSR Diagnoses, 2019	49
Treat-and-Release Visits: Most Common Primary CCSR Diagnoses by Age Group, 2019.	50
Treat-and-Release Visits: Visits with Excess Length of Stay, 2016-2019	51
Treat-and-Release Visits: Excess Length of Stay by Hospital Cohort, 2019	52
Treat-and-Release Visits: Excess Length of Stay by High Public Payer Status, 2019	53
Treat-and-Release Visits: Excess Length of Stay by Expected Primary Payer Type, 2019	54
Treat-and-Release Visits: Excess Length of Stay by Age Group, 2019	55
Treat-and-Release Visits: Excess Length of Stay by Race/Ethnicity, 2019.	56
Treat-and-Release Visits: Excess Length of Stay by Behavioral Health Primary Diagnoses, 2019	57
Notes	58

Executive Summary

This is the first annual statewide report on emergency department (ED) utilization and part of a new reporting series providing analyses on patterns and trends of acute care hospital services from CHIA's Case Mix database. This report presents key measures of ED utilization overall and by hospital, patient, and visit characteristics. Except where specified, ED visits in this report include those associated with inpatient admissions or observation stays, as well as treat-and-release visits, which are ED visits associated with neither an inpatient admission nor an observation stay. Annual rates are provided for federal fiscal year (FFY) 2019, and trends are provided for the years FFY 2016-2019.

Overall ED Utilization

- In FFY 2019, there were over 3.1 million ED visits in the Commonwealth.
- Over three quarters (76.8%) of ED visits were treat-and-release, 17.0% resulted in inpatient admission, and 6.1% resulted in placement in observation.
- Per capita ED visit rates were highest in Western and Southeastern MA and lowest in Metro Boston.

Hospital and Patient Characteristics

- Fifty-one percent of ED visits were at community hospitals with a high public-payer designation.
- Most (51.1%) ED visits were among patients younger than 45 years old.

- Non-Hispanic Black and Hispanic patients had disproportionately high rates of ED visits (26.6% of visits, 24.9% of patient population vs. 19.5% of resident population).

Payer Type

- Nearly thirty-two percent of ED visits had an expected primary payer type of Medicaid, followed by Medicare (28.2%) and commercial insurance (26.9%).
- Medicaid was the most common expected primary payer type in all regions except Metro Boston, where commercial insurance was the most common.
- From FFY 2016 to 2019, Medicaid and Commercial ED visits declined (by 10.7% and 7.5%, respectively), while Medicare ED visits remained stable.

Behavioral Health

- Nearly eight percent of ED visits had a primary diagnosis of a behavioral health condition; 4.3% were mental health diagnoses and 3.7% were substance use disorder diagnoses.
- ED visits with behavioral health primary diagnoses were nearly twice as common among Medicaid patients as among Medicare and commercially insured patients (11.3%, 6.1%, and 6.6%, respectively).

- Adults aged 18-64 had the highest proportion of ED visits with behavioral health primary diagnoses.
- Behavioral health-related ED visits were more common among non-Hispanic American Indian/Alaska Native (9.1%) and non-Hispanic White patients (8.6%) than other race/ethnicity groups (5.1-7.9%).
- Metro Boston and Western Massachusetts had the highest proportion of ED visits with behavioral health primary diagnoses (8.7% and 8.2%, respectively).

Frequent ED Utilizers

- Patients with a history of frequent ED use represented 1.2% of ED patients and accounted for 9.4% of all ED visits.
- Medicaid and Medicare patients were much more likely to be identified as frequent ED utilizers than patients with commercial insurance.
- Adults aged 45-64 represented the highest proportion of frequent ED utilizers by age group.
- Non-Hispanic Black patients were disproportionately found to be frequent ED utilizers.

Treat-and-Release Visit Characteristics

- Treat and release ED visits declined by 3.6% from FFY 2016 to FFY 2019.
- The most frequent diagnoses for treat-and-release visits were abdominal pain and injuries among adults, and upper respiratory infections among children.
- The average length of stay among treat-and-release visits remained stable from FFY 2016 to FFY 2019 at approximately four hours.
- Treat-and-release visits for behavioral health conditions had much longer average length of stay than other types of treat-and-release visits.

- Over thirty-two percent of treat-and-release visits lasted more than four hours; this was twice as common among treat-and-release visits with behavioral health primary diagnoses.

CHIA will continue to monitor ED visit patterns and trends as hospitals continue to evolve to meet the changing health care needs of the residents in the Commonwealth. ■

SECTION 1:

Introduction

Section 8 of Chapter 12C of the Massachusetts General Laws grants the Massachusetts Center for Health Information and Analysis (CHIA) authority to collect data from Massachusetts hospitals. CHIA, and its predecessor agency the Division of Health Care Finance and Policy, have collected data from Massachusetts acute care hospitals for more than twenty years, including inpatient, emergency department (ED), and outpatient observation data.

To better understand patterns and trends in ED utilization, CHIA has analyzed ED visits in all Massachusetts acute care hospitals over a four-year period, from FFY 2016 to FFY 2019 (October 1, 2015 – September 30, 2019). This report presents key measures of ED utilization overall and by hospital, patient, and visit characteristics. It also provides a deeper look at visits for behavioral health conditions and visits by patients who are frequent utilizers of the ED, defined as patients who have 10 or more

ED visits in a given 12-month period. Finally, the report presents select characteristics of treat-and-release ED visits, which are those ED visits resulting in neither an inpatient admission nor an observation stay at the same facility. These analyses include overall utilization; hospital, patient, and visit characteristics; and excess length of stay, defined as ED visits lasting more than four hours from the time of registration. Annual rates in this report are provided for FFY 2019 unless otherwise specified, and trends are provided for the years FFY 2016-2019. The report is accompanied by a [databook](#) with more detailed analyses and findings as well as a [technical appendix](#).

The source of this report is CHIA's Acute Hospital Case Mix Database (Case Mix), which includes CHIA's Hospital Inpatient Discharge Databases (HIDD), Observation Outpatient Databases (OOD), and Emergency Department Databases (EDD). These databases contain visit-level

data provided by all acute care hospitals in Massachusetts on patient characteristics, admission and departure status, diagnoses, treatments, services, charges, and length of stay. ED visits are allocated to one of these three databases hierarchically: visits associated with an inpatient admission are located on the inpatient discharge record in the HIDD; visits associated with an observation stay but not an inpatient admission are located on the observation stay record in the OOD; and treat-and-release visits associated with neither an inpatient admission nor an observation stay are in the EDD. Except for Section 5: Treat-and-Release Visit Characteristics and Utilization, analyses in this report include ED visits from all three databases.

Of the 61 acute care hospitals in Massachusetts, 57 operate EDs with one or more campuses, totaling 71 locations. Throughout this report, EDs and their campuses are classified by the hospital characteristics of their affiliated acute care hospital. These characteristics include hospital cohort, high public payer (HPP) status, multi-hospital system affiliation, and trauma designation. For a list of all hospitals and ED campuses included in this report, please see the [technical appendix](#).

- Most EDs (42 of 57) in Massachusetts are affiliated with community hospitals. Additionally, six EDs are affiliated with Academic Medical Centers (AMCs), seven are affiliated with teaching hospitals, and two are affiliated with specialty hospitals.

- Over half (38 of 57) of Massachusetts EDs are affiliated with High Public Payer (HPP) hospitals, meaning that the hospital received more than 63% of its Gross Patient Service Revenue from government payers. These include Medicare, Medicaid, and other government payers such as the Massachusetts Health Safety Net. Of the 42 EDs associated with community hospitals, 30 are affiliated with those designated as HPP hospitals.
- Most EDs (44 of 57) in Massachusetts are affiliated with a multi-hospital system, consisting of two or more hospitals (note that EDs may have multiple campuses but can still be classified as individual hospitals). In FFY 2019, there were 11 multi-hospital systems in Massachusetts, down from 12 in FFY 2018 after the merger of CareGroup and Lahey Health System to form Beth Israel Lahey Health as of March 1, 2019.

This report is the first annual statewide report on ED utilization and part of a new series providing analyses on patterns and trends of acute care hospital services from the Case Mix database. In addition to this report, CHIA published a parallel report on inpatient visits in Massachusetts in December 2020.

For further information about the Case Mix data and measures used in this report, please see the [technical appendix](#). ■

Characteristics of Massachusetts Hospitals with Emergency Departments, 2019

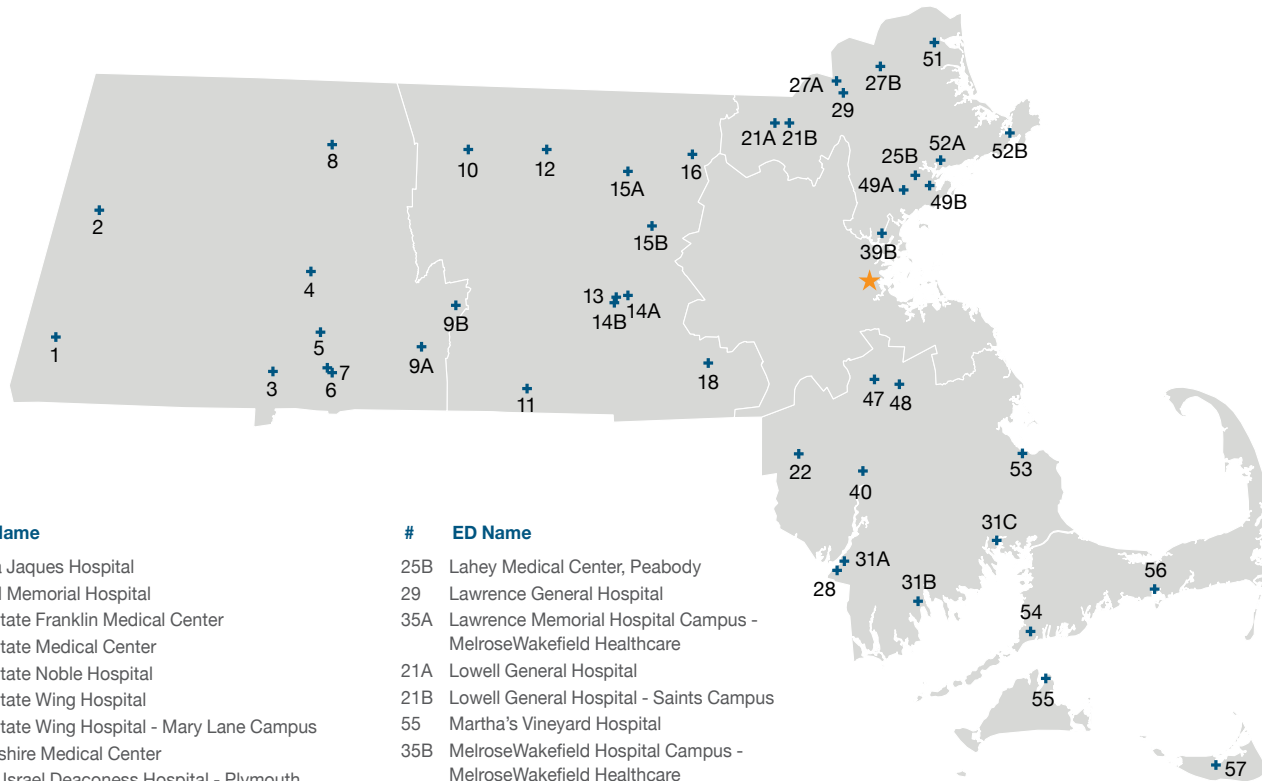
Hospital Characteristic	Number of Emergency Departments
All Emergency Departments	57
Cohort	
Academic Medical Center	6
Community Hospital	12
Community Hospital-High Public Payer	30
Teaching Hospital	7
Specialty Hospital	2
High Public Payer	
Yes	38
No	19
Tax Status	
Non-Profit/Municipal	47
For-Profit	10
System Affiliation	
Not Affiliated	13
Affiliated	44

Hospital Characteristic	Number of Emergency Departments
Hospital System	
Baystate Health	4
Berkshire Health Systems	2
Beth Israel Lahey Health	9
Cape Cod Healthcare	2
Heywood Healthcare	2
Partners HealthCare	9
Steward Health Care	8
Tenet Healthcare	2
UMass Memorial Health Care	3
Wellforce	3
Trauma Designation – Adult	
Level I	8
Level II	1
Level III	7
Trauma Designation – Pediatric	
Level I	4
Level II	2

Note: Hospitals may have one or more ED campuses; reporting for this table is at the hospital level. For a list of hospitals and ED campuses included in this report, please see the [databook](#). For hospital characteristic definitions, please see the [technical appendix](#).

Data source: CHIA Hospital Profiles, 2019

Massachusetts Emergency Department Campuses, 2019



* Please see page 11 for detailed view of hospital campuses in Metro Boston.

ED Name

- 51 Anna Jaques Hospital
- 10 Athol Memorial Hospital
- 8 Baystate Franklin Medical Center
- 6 Baystate Medical Center
- 3 Baystate Noble Hospital
- 9A Baystate Wing Hospital
- 9B Baystate Wing Hospital - Mary Lane Campus
- 2 Berkshire Medical Center
- 53 Beth Israel Deaconess Hospital - Plymouth
- 39B Cambridge Health Alliance - Everett Hospital Campus
- 56 Cape Cod Hospital
- 4 Cooley Dickinson Hospital
- 1 Fairview Hospital
- 54 Falmouth Hospital
- 11 Harrington Memorial Hospital
- 15B HealthAlliance - Clinton Hospital
- 15A HealthAlliance Hospital - Leominster Campus
- 12 Heywood Hospital
- 5 Holyoke Medical Center
- 52B Lahey Health - Addison Gilbert Hospital
- 52A Lahey Health - Beverly Hospital

ED Name

- 25B Lahey Medical Center, Peabody
- 29 Lawrence General Hospital
- 35A Lawrence Memorial Hospital Campus - MelroseWakefield Healthcare
- 21A Lowell General Hospital
- 21B Lowell General Hospital - Saints Campus
- 55 Martha's Vineyard Hospital
- 35B MelroseWakefield Hospital Campus - MelroseWakefield Healthcare
- 7 Mercy Medical Center
- 19B MetroWest Medical Center - Leonard Morse Campus
- 18 Milford Regional Medical Center
- 40 Morton Hospital
- 57 Nantucket Cottage Hospital
- 16 Nashoba Valley Medical Center
- 49B North Shore Medical Center - Salem Campus
- 49A North Shore Medical Center - Union Campus
- 13 Saint Vincent Hospital
- 48 Signature Healthcare Brockton Hospital
- 31A Southcoast Hospitals Group - Charlton Memorial Hospital

ED Name

- 31B Southcoast Hospitals Group - St. Luke's Hospital
- 31C Southcoast Hospitals Group - Tobey Hospital
- 47 Steward Good Samaritan Medical Center
- 27B Steward Holy Family Hospital - Haverhill
- 27A Steward Holy Family Hospital - Methuen
- 28 Steward Saint Anne's Hospital
- 22 Sturdy Memorial Hospital
- 14A UMass Memorial Campus
- 14B UMass Memorial Medical Center - University Campus

Note: Hospitals may have one or more ED campuses; reporting on this page is at the ED campus level. For a list of all hospitals and ED campuses included in this report, please see the [databook](#).

Data source: CHIA Hospital Profiles, 2019 and MassGIS¹

Metro Boston Emergency Department Campuses, 2019



#	ED Campus Name
41	Beth Israel Deaconess Hospital - Milton
24	Beth Israel Deaconess Hospital - Needham
36B	Beth Israel Deaconess Medical Center - East Campus
36A	Beth Israel Deaconess Medical Center - West Campus
38	Boston Children's Hospital
42	Boston Medical Center - Menino Pavilion Campus
33	Brigham and Women's Faulkner Hospital
37	Brigham and Women's Hospital
39A	Cambridge Health Alliance - Cambridge Hospital Campus
20	Emerson Hospital
25A	Lahey Hospital & Medical Center
26	Steward Norwood Hospital
17	Marlborough Hospital
43	Massachusetts Eye and Ear Infirmary
44	Massachusetts General Hospital
19A	MetroWest Medical Center - Framingham Campus
19B	MetroWest Medical Center - Leonard Morse Campus
32	Mount Auburn Hospital
23	Newton-Wellesley Hospital
50	South Shore Hospital
45	Steward Carney Hospital
30	Steward St. Elizabeth's Medical Center
46	Tufts Medical Center
34	Winchester Hospital

Note: Hospitals may have one or more ED campuses; reporting on this page is at the ED campus level. For a list of all hospitals and ED campuses included in this report, please see the [databook](#).

Data source: CHIA Hospital Profiles, 2019 and MassGIS²

SECTION 2:

Statewide Visit Characteristics and Utilization

Emergency departments are a vital setting of care in the Commonwealth, with over 3.1 million ED visits in FFY 2019. This section presents visit-level information on ED visits, including annual trends in ED utilization for FFY 2016-2019, as well as hospital characteristics, patient characteristics, and expected primary payer type for FFY 2019.

All ED visits at acute care hospitals are included in the analyses in this section, including treat-and-release visits as well as those associated with inpatient admissions and/or observation stays.

KEY FINDINGS:

Utilization

- Total ED visits from Massachusetts' 57 acute care hospital EDs declined 2.3% from FFY 2016 to FFY 2019 (from 3,222,853 to 3,148,111 visits).

- Treat-and-release ED visits declined over this period by 3.6%, whereas ED visits resulting in inpatient admissions and observation stays increased (by 1.7% and 3.0%, respectively).

Hospital Characteristics

- Fifty-one percent of ED visits were at community hospitals with a high public-payer designation.
- From FFY 2016 to FFY 2019, the share of ED visits from community HPP hospitals has grown slightly (from 48.9% to 51.0%). An observed increase in ED visits among community HPP hospitals is attributable to an increase in the number of hospitals classified as HPP hospitals between FFY 2017 and FFY 2018.
- Over two in three ED visits (68.3%) were to hospitals with a multi-hospital system affiliation.

- Over two in five visits (41.7%) were to trauma-designated hospitals and more than one in five ED visits overall (22.6%) were to hospitals with the highest trauma designation (Level I).

Patient Characteristics

- Most (51.1%) ED visits were among patients younger than 45 years old.
- ED visits for patients aged 65 and over increased over the four-year period, whereas visits declined for all other age groups.
- The percentage of ED visits that were for female patients exceeded that of male patients by approximately 6 percentage points, due in part to hospital visits for obstetric care and other maternity-related conditions and because female residents make up a larger share of Massachusetts residents over the age of 65.³
- Non-Hispanic Black and Hispanic patients had disproportionately high rates of ED visits (26.6% of visits, 24.9% of patient population vs. 19.5% of resident

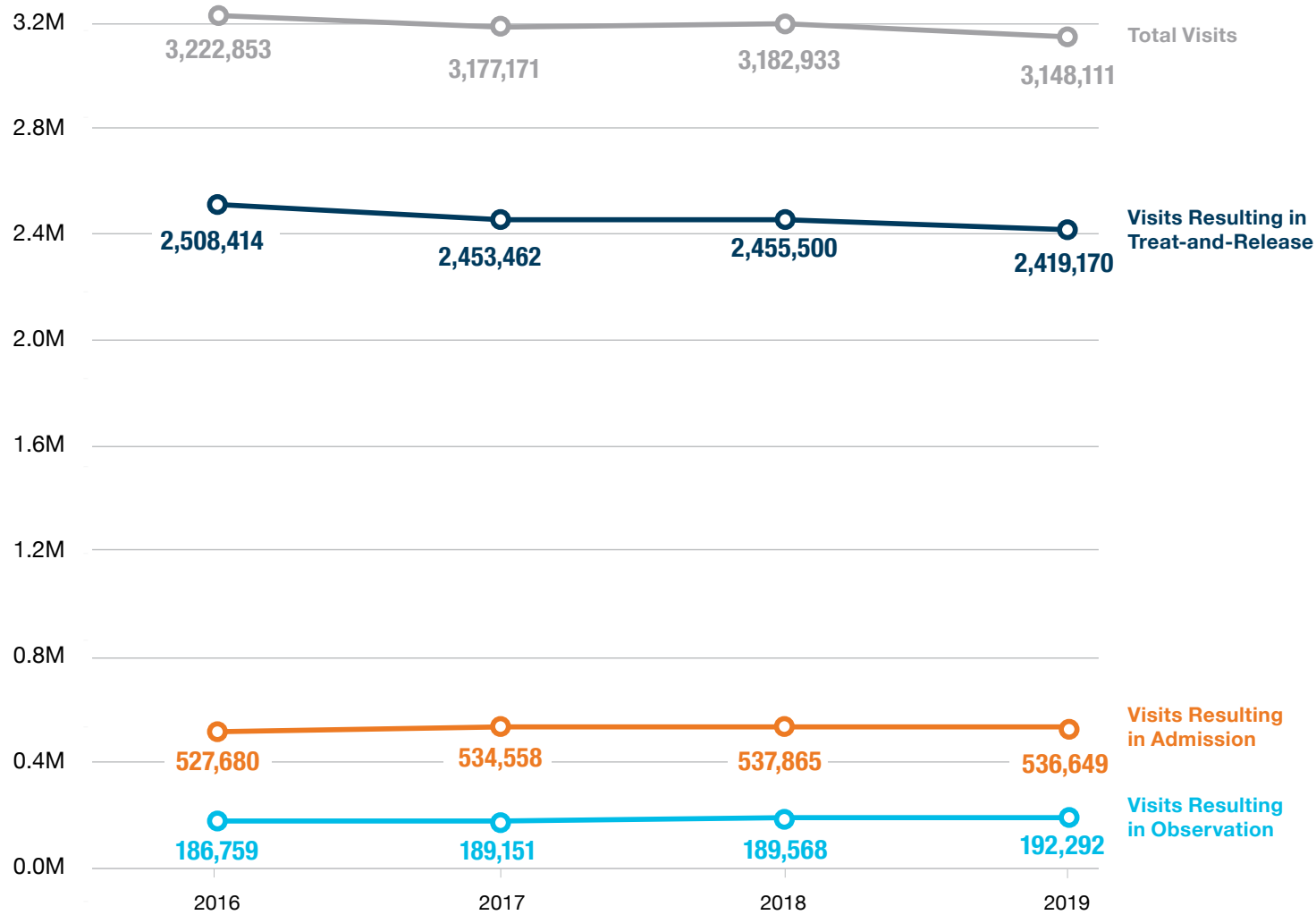
population⁴). This share also increased over the four-year period.

- Nearly all (95.8%) of ED visits were for patients with a permanent residence in Massachusetts.
- Per capita ED visit rates were highest in the Western and Southeastern Massachusetts regions, and lowest in the Metro Boston region.

Payer Type

- Nearly thirty-two percent of ED visits had an expected primary payer type of Medicaid, followed by Medicare (28.2%) and commercial insurance (26.9%).
- From FFY 2016 to FFY 2019, Medicaid and Commercial ED visits declined (by 10.7% and 7.5%, respectively), while Medicare ED visits remained stable.
- Medicaid was the most common expected primary payer type in all regions except Metro Boston, where commercial insurance was the most common. ■

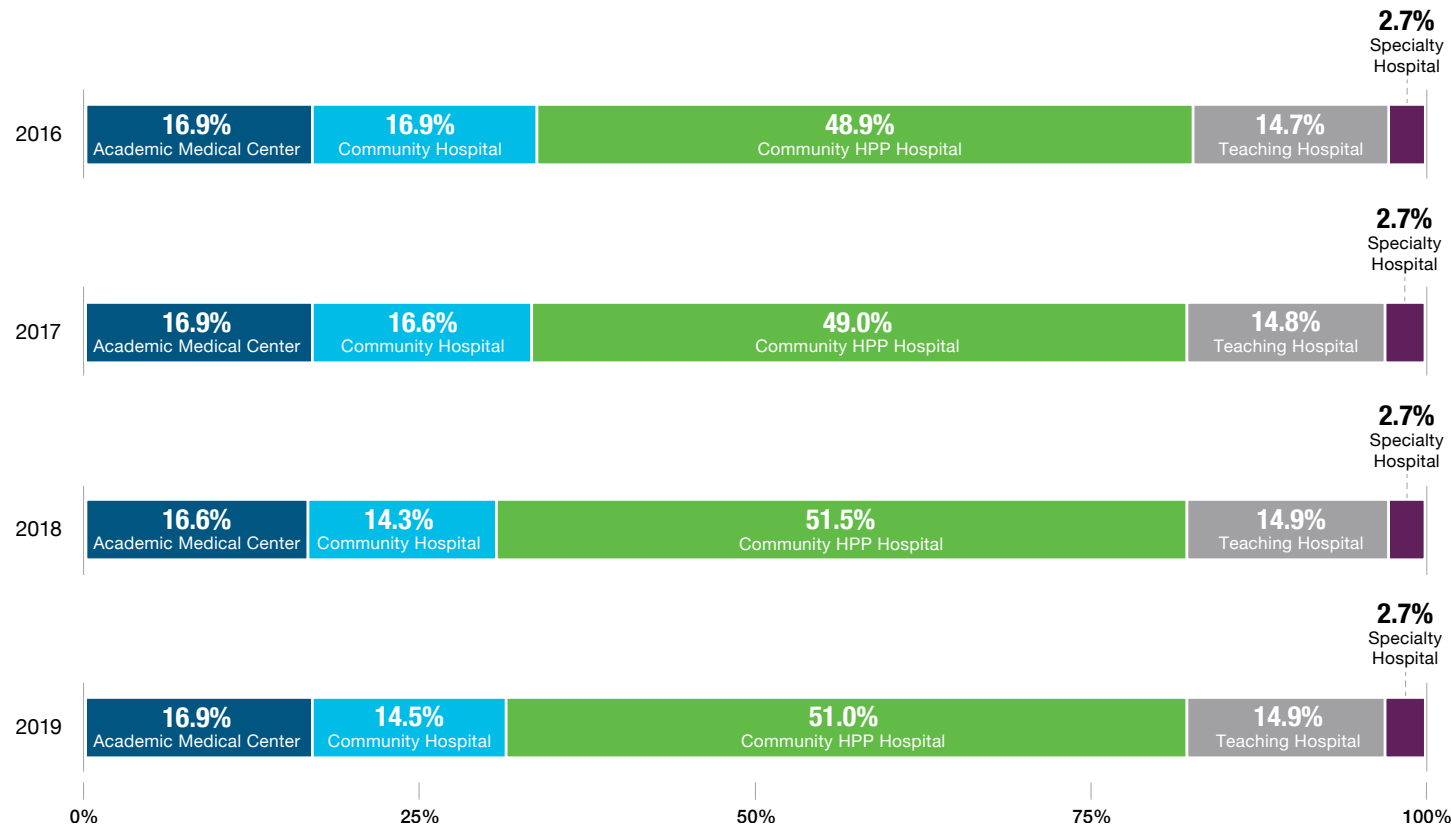
Visit Utilization Overview, 2016-2019



Note: ED visit information from the Massachusetts Acute Hospital Case Mix Database came from one of three mutually exclusive data sources: visits resulting in treat-and-release are ED visits that were not associated with an inpatient visit or an observation stay; visits resulting in admission were ED visits associated with an inpatient admission; and visits resulting in observation are ED visits associated with an observation stay but no inpatient admission.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Hospital Cohort, 2016-2019

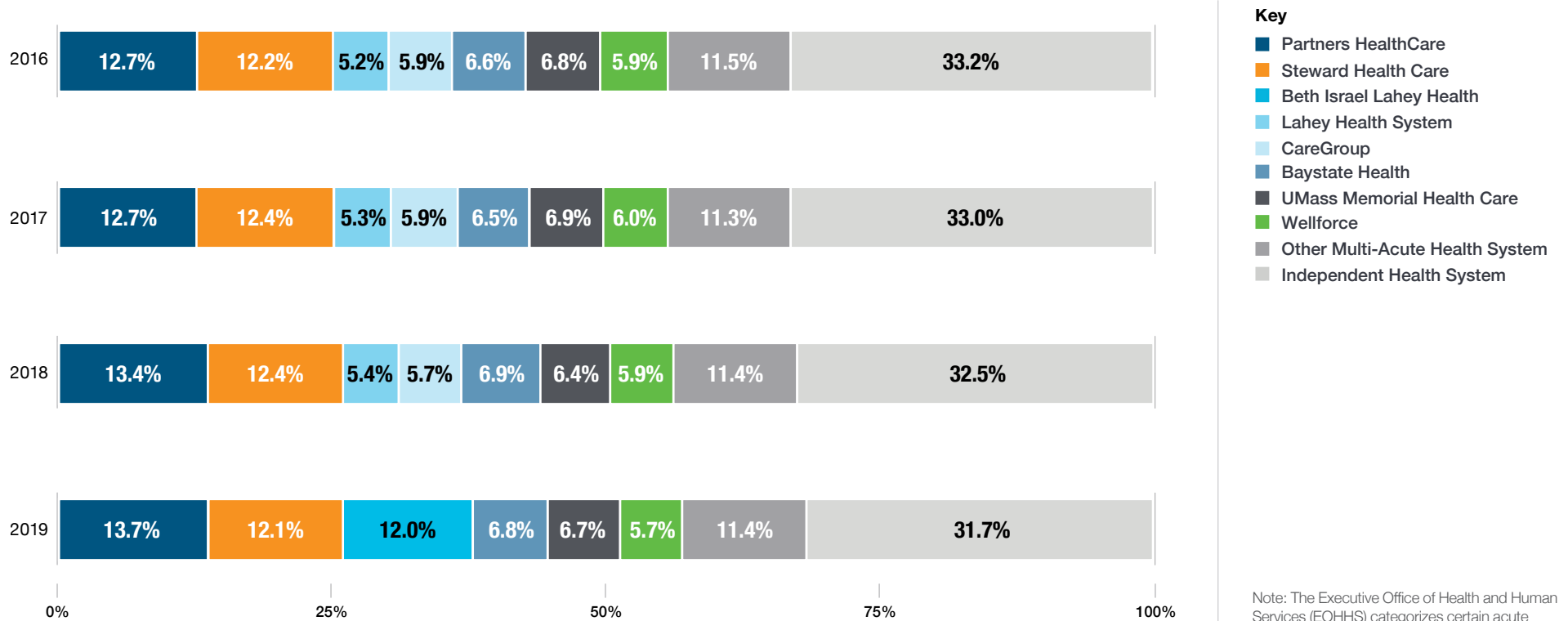


	2016	2017	2018	2019
Academic Medical Center	543,983	537,939	527,968	532,077
Community Hospital	544,362	526,280	455,348	457,023
Community HPP Hospital	1,574,991	1,557,866	1,638,954	1,604,069
Teaching Hospital	473,643	469,347	475,332	469,657
Specialty Hospital	85,870	85,738	85,331	85,283
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Each acute care hospital is assigned to one of five mutually exclusive hospital groups: Academic Medical Centers (AMCs), teaching hospitals other than AMCs, community-High Public Payer (HPP) hospitals, other community hospitals, and specialty hospitals. Hospital characteristics are assessed at the end of the state fiscal year. Percentages may not sum to 100% due to rounding and missing data. The number of visits with missing cohort data due to missing hospital ID information was 4 in FFY 2016, 1 in FFY 2017, and 2 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by System Affiliation, 2016-2019



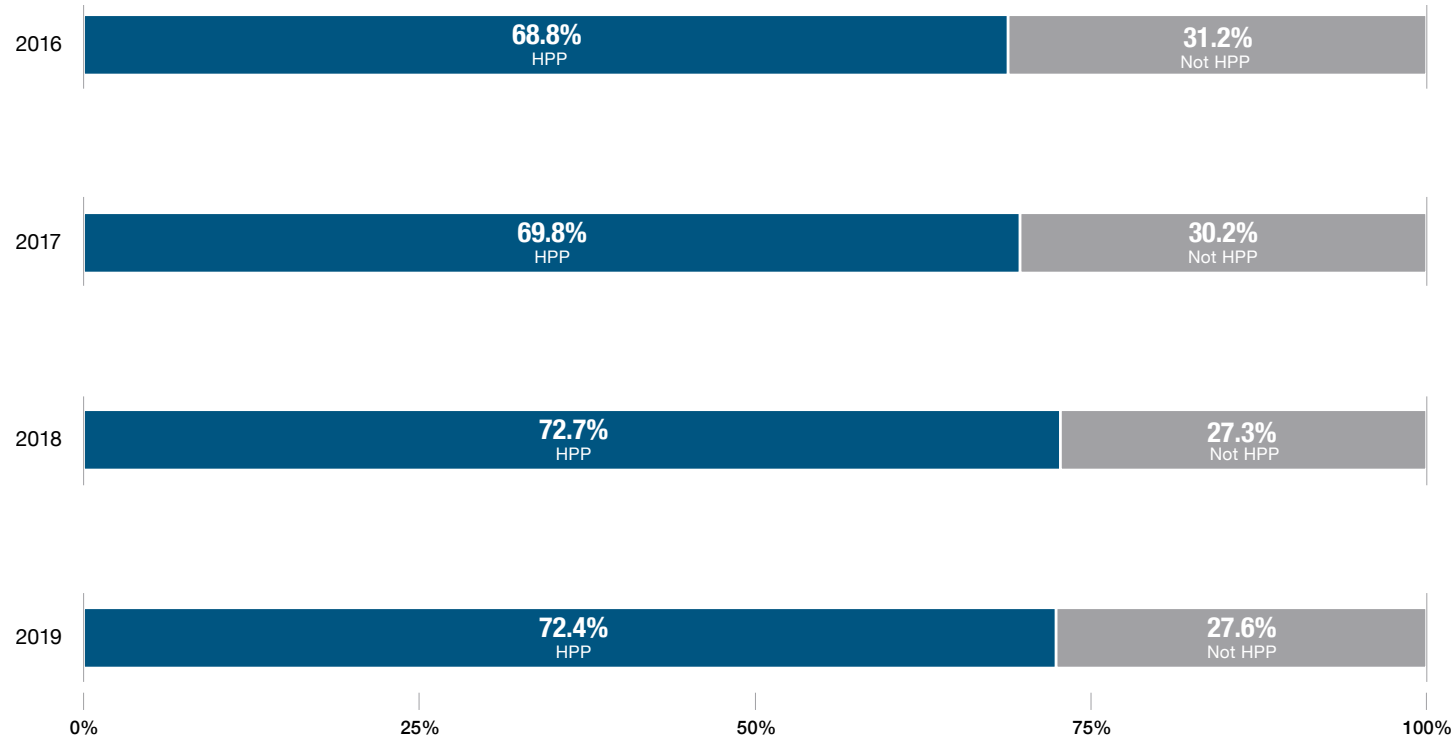
Key

- Partners HealthCare
- Steward Health Care
- Beth Israel Lahey Health
- Lahey Health System
- CareGroup
- Baystate Health
- UMass Memorial Health Care
- Wellforce
- Other Multi-Acute Health System
- Independent Health System

Note: The Executive Office of Health and Human Services (EOHHS) categorizes certain acute hospitals as High Public Payer (HPP) hospitals for the purpose of setting MassHealth rates. A hospital qualified for HPP status if it had 63% or more of gross patient service revenue attributed to Medicare, Medicaid, and other government payers, including the Health Safety Net. Percentages may not sum to 100% due to rounding and missing data. The number of visits with missing HPP status due to missing hospital ID information was 4 in FFY 2016, 1 in FFY 2017, and 2 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by High Public Payer Status, 2016-2019

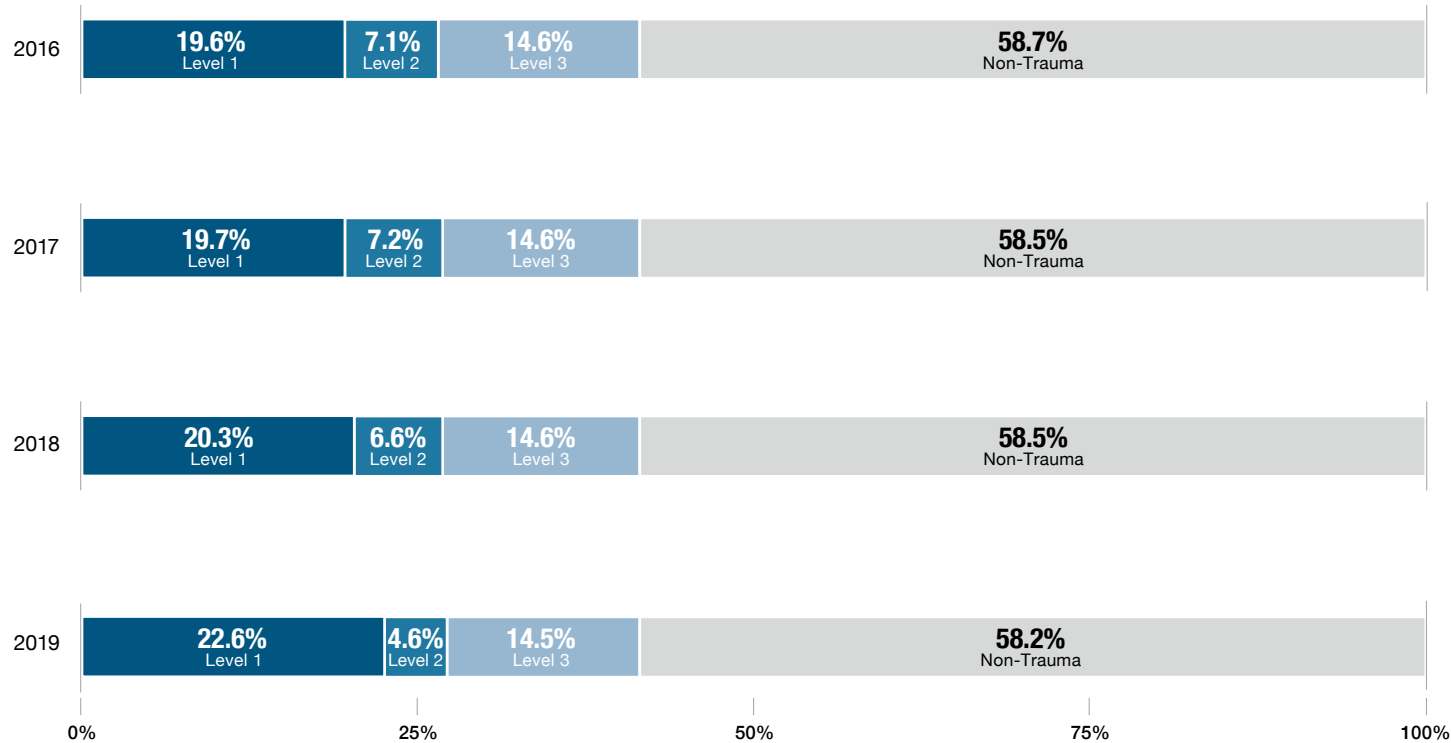


	2016	2017	2018	2019
HPP	2,216,168	2,216,563	2,314,851	2,280,344
Not HPP	1,006,681	960,607	868,082	867,765
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: CareGroup and Lahey Health System merged to form Beth Israel Lahey Health on March 1, 2019. Although FFY 2019 starts on October 1, 2018, prior to the official merger date, this report uses Beth Israel Lahey Health for all of FFY 2019. As of FFY 2020, Partners HealthCare is now known as Mass General Brigham. Percentages may not sum to 100% due to rounding and missing hospital ID information. The number of visits with missing system affiliation due to missing hospital ID information was 4 in FFY 2016, 1 in FFY 2017, and 2 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Trauma Designation, 2016-2019

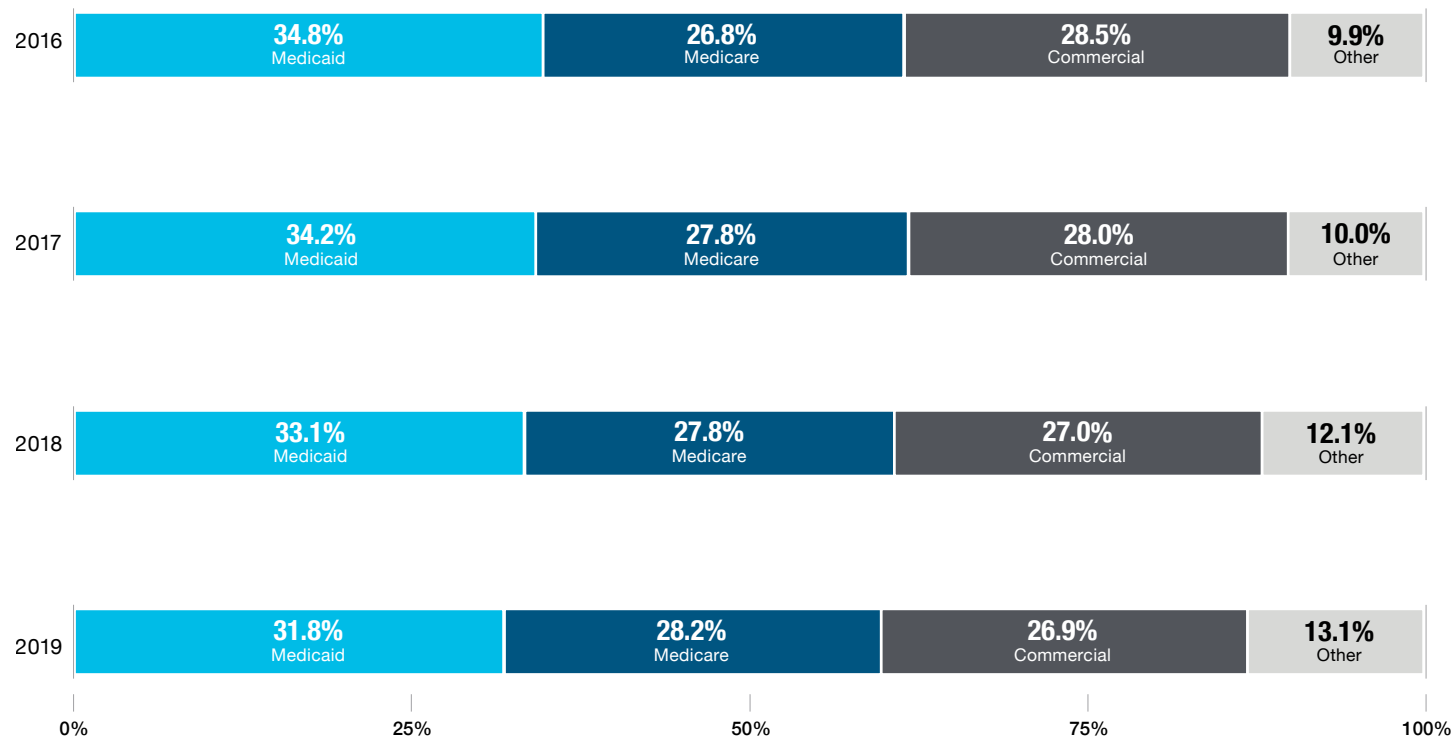


	2016	2017	2018	2019
Level I	631,198	626,721	645,406	712,772
Level II	229,367	228,485	209,665	145,448
Level III	470,115	464,027	456,960	456,551
Non-Trauma	1,892,173	1,857,938	1,861,902	1,833,340
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Facilities designated as the point of entry destinations for trauma care in Massachusetts are verified by the American College of Surgeons (ACS) and approved by the Massachusetts Department of Public Health (DPH). Trauma designation levels in Massachusetts ranged between Level I and Level III in 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Expected Primary Payer Type, 2016-2019

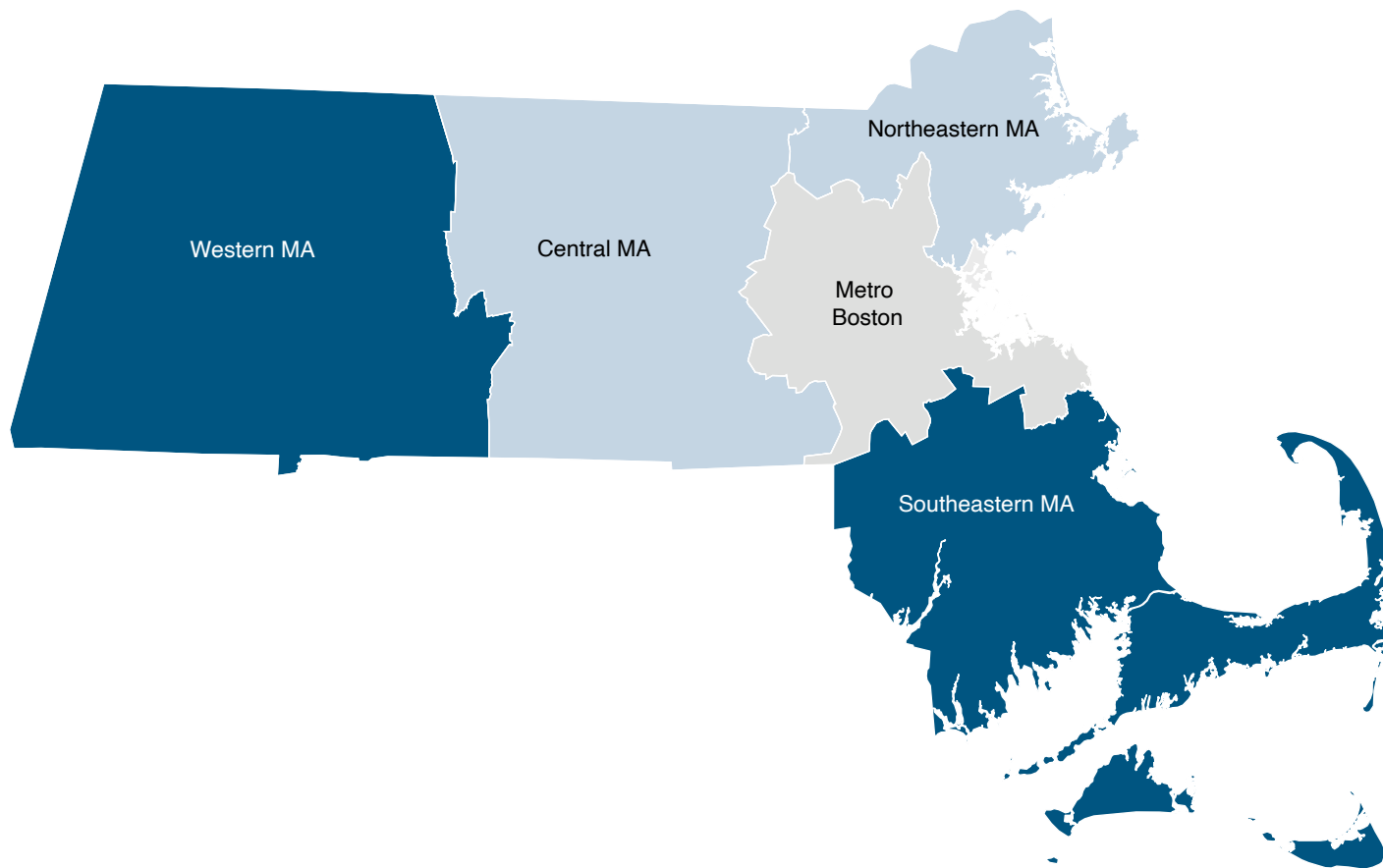


	2016	2017	2018	2019
Medicaid	1,121,275	1,086,442	1,053,117	1,001,677
Medicare	864,057	883,383	886,194	886,287
Commercial	917,395	888,663	859,876	848,355
Other	319,908	318,549	383,662	411,518
Missing	218	134	84	274
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Analysis includes information on expected primary payer type as provided by the hospital and does not include information on secondary or supplemental payer information. Figures for expected primary payer type may not sum to the total values due to rounding and because they exclude visits with missing payer type information. The number of visits with missing expected primary payer type was 218 in FFY 2016, 134 in FFY 2017, 84 in FFY 2018, and 274 in 2019. Other insurance includes Worker's Compensation, Other Government Payment, Auto Insurance, and Dental Plans, Self-Pay, Free Care, and Health Safety Net. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Patient EMS Region, 2019



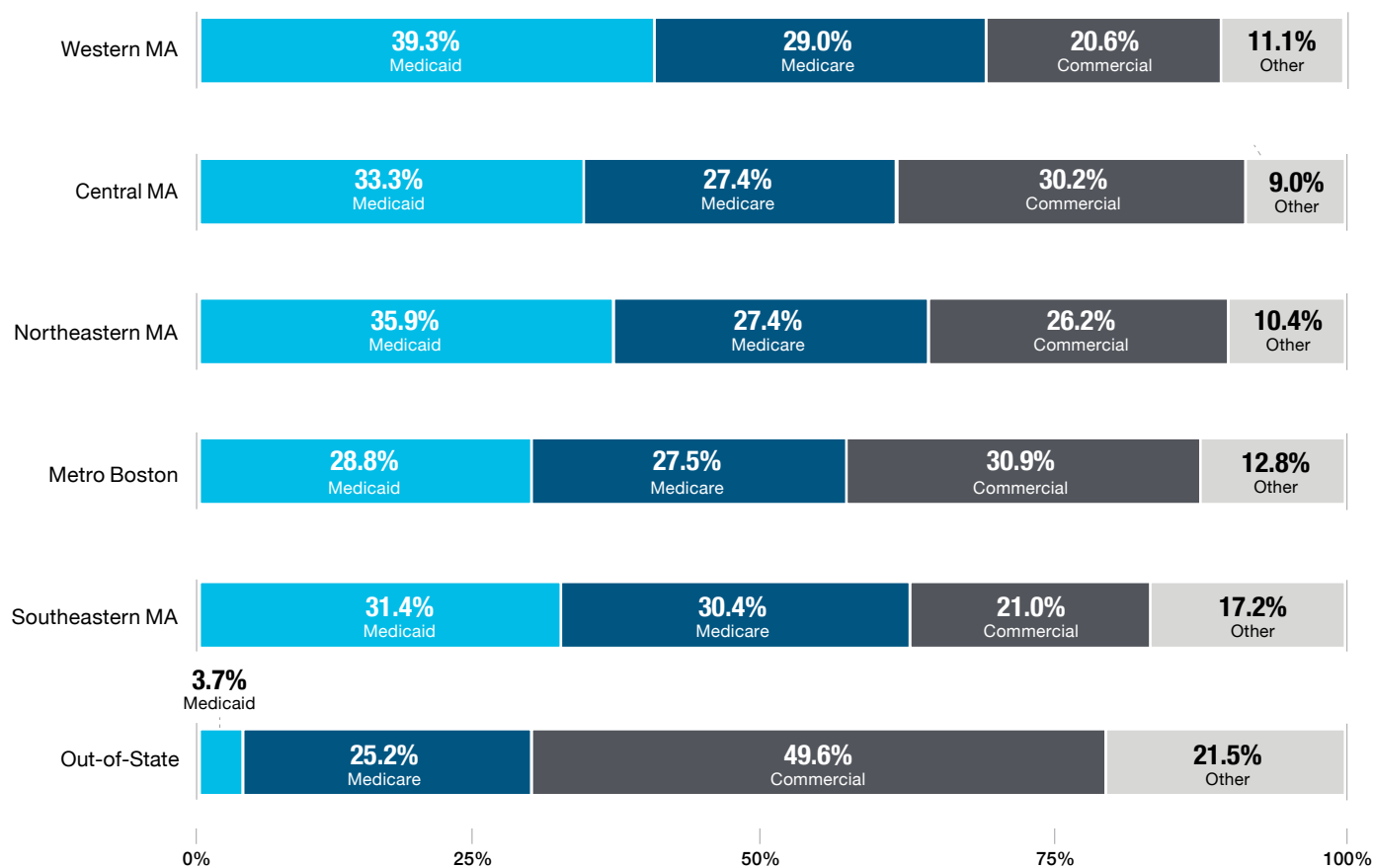
Visits per 100,000 persons

- 30,000-39,999
- 40,000-49,999
- 50,000-59,999

Source: Patient residence was determined from permanent address information provided on the visit, including valid city/town, ZIP code, and two-character permanent state identification codes. Visits for permanent Massachusetts residents were assigned to one of five Emergency Medical Services (EMS) regions designated at the city/town level by the Executive Office of Health and Human Services (EOHHS). 25,953 visits with out-of-state, foreign, or invalid address information are not shown. Visit rates per 100,000 persons were based on total FFY 2019 visits and 5-year population estimates from the 2019 American Community Survey, aggregated to the region level by town and city. See [technical appendix](#) for more information.

Notes: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

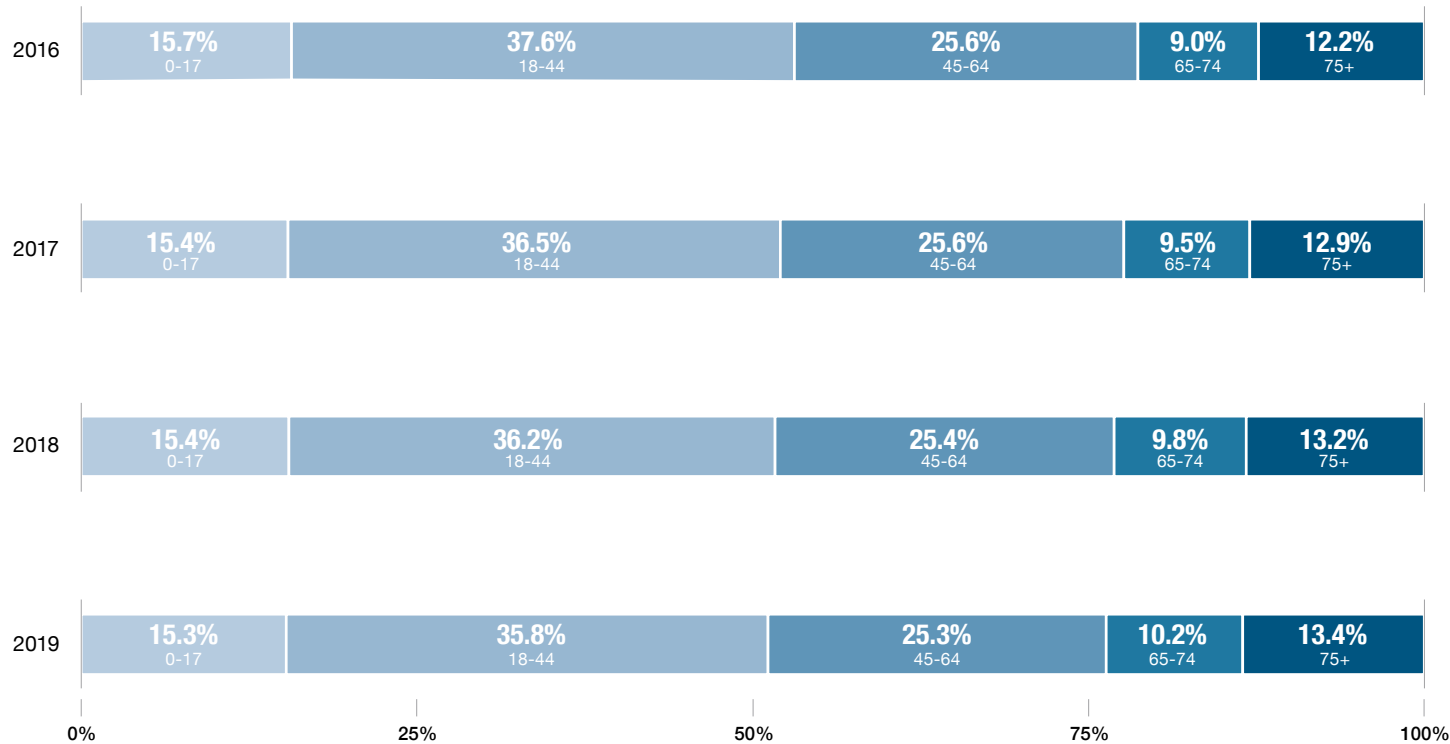
Visits by Expected Primary Payer Type and Patient EMS Region, 2019



Note: Analysis includes information on expected primary payer type as provided by the hospital and does not include information on secondary or supplemental payer information. Other insurance includes Worker's Compensation, Other Government Payment, Auto Insurance, and Dental Plans, Self-Pay, Free Care, and Health Safety Net. Patient residence was determined from permanent address information provided on the visit, including valid city/town, ZIP code, and two-character permanent state identification codes. Visits for permanent Massachusetts residents were assigned to one of five EMS regions designated by city/town by the Executive Office of Health and Human Services (EOHHS). Figures for expected primary payer type may not sum to the total values due to rounding and because they exclude visits with missing payer type information. The number of visits with missing expected primary payer type was 218 in FFY 2016, 134 in FFY 2017, 84 in FFY 2018, and 274 in 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Age Group, 2016-2019

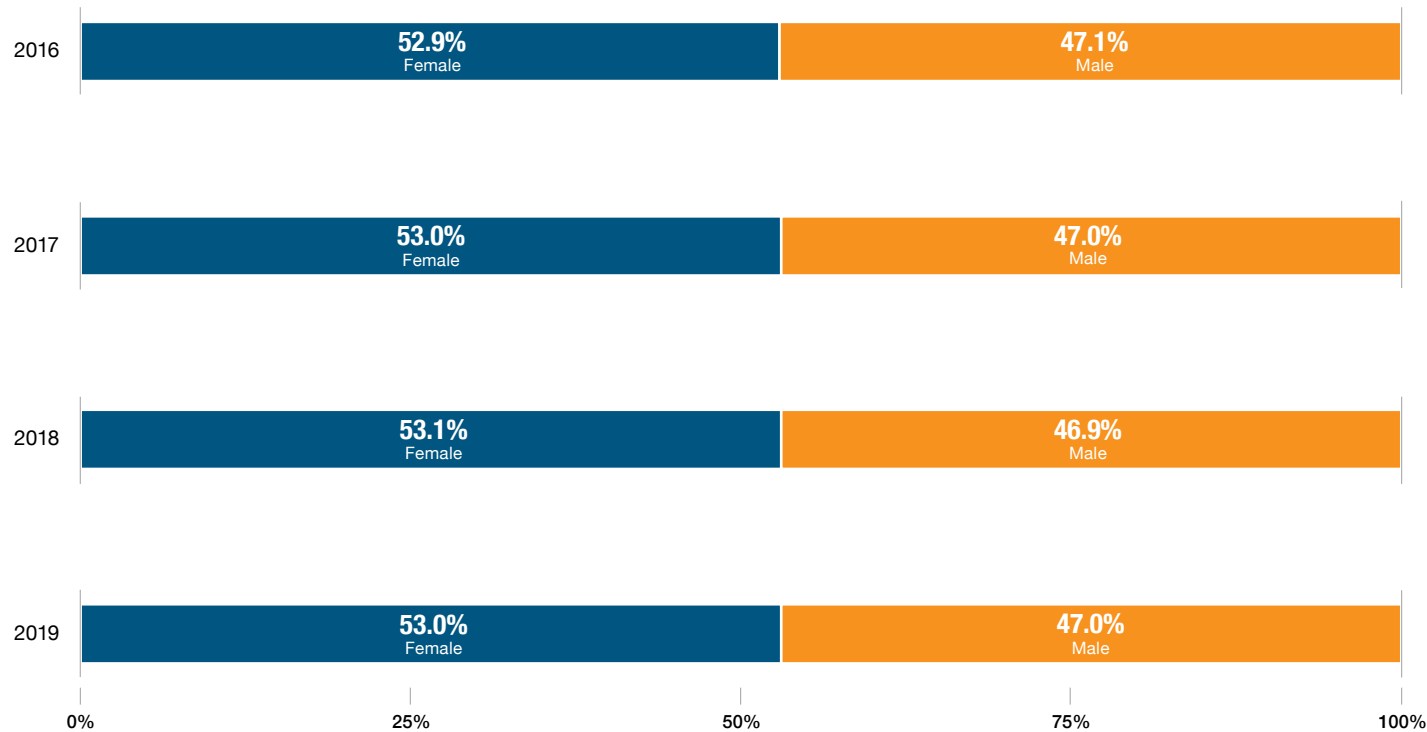


	2016	2017	2018	2019
0-17	504,873	489,946	490,394	480,735
18-44	1,210,678	1,161,145	1,151,939	1,128,343
45-64	823,780	813,826	807,693	795,822
65-74	289,561	303,313	313,221	319,986
75+	393,880	408,701	419,430	422,907
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Figures for age may not sum to the total values due to rounding and because they exclude visits with missing age. The number of visits with missing age was 81 in FFY 2016, 240 in FFY 2017, 256 in FFY 2018, and 318 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Gender, 2016-2019

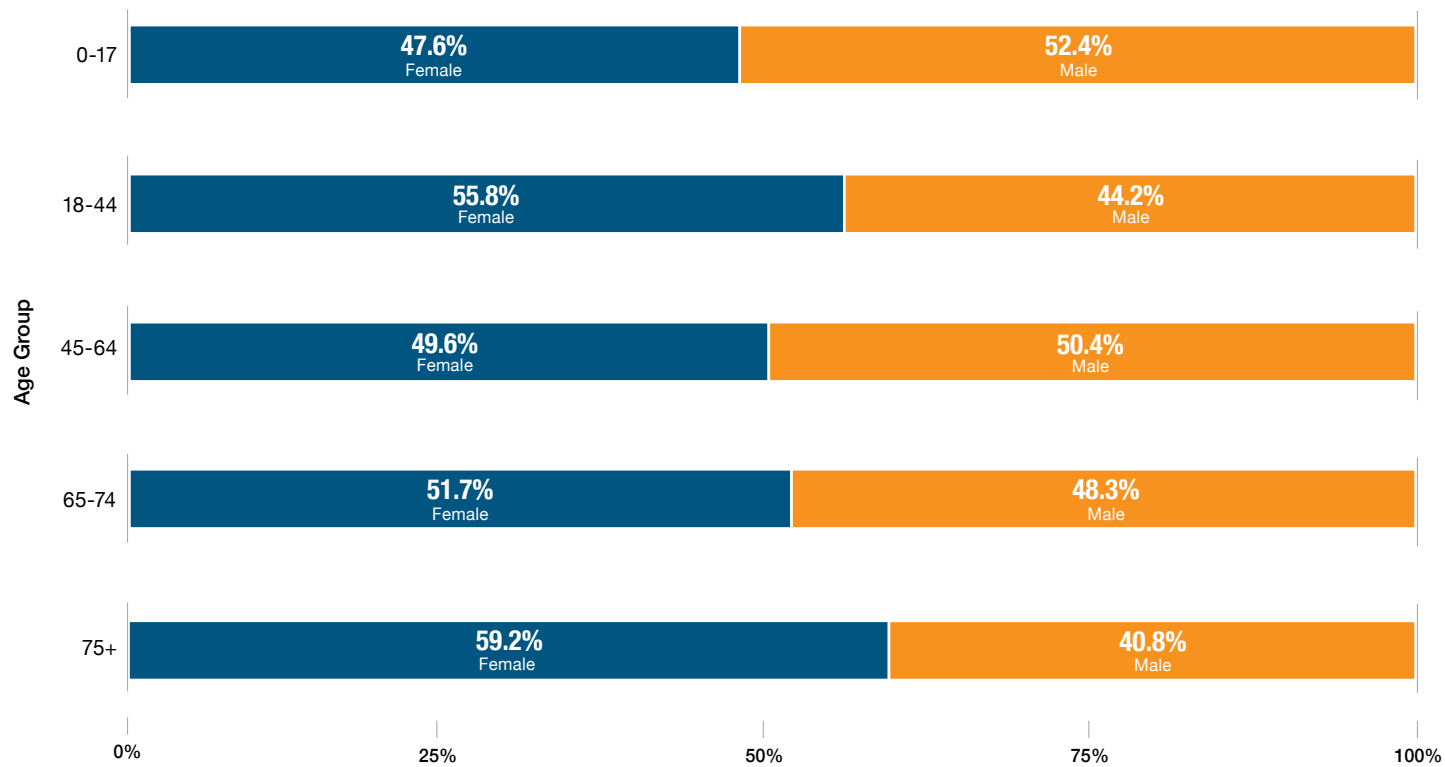


	2016	2017	2018	2019
Female	1,705,157	1,683,975	1,690,897	1,669,483
Male	1,517,660	1,493,156	1,491,939	1,478,454
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Figures for male and female may not sum to the total values due to rounding and because they exclude visits with missing or Unknown Gender category. The number of visits with missing or unknown gender in was 36 in FFY 2016, 40 in FFY 2017, 97 in FFY 2018, and 174 in 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

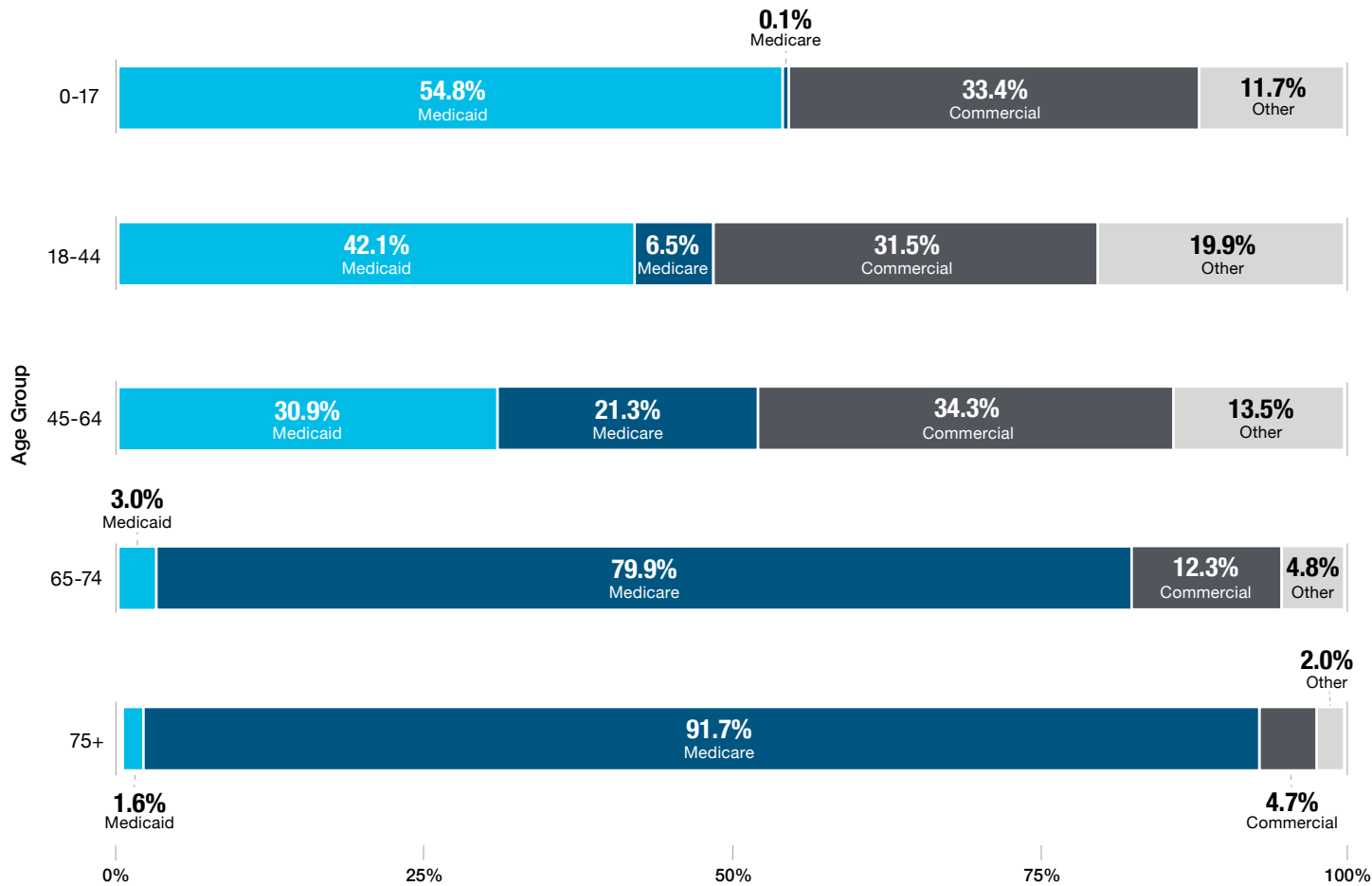
Visits by Age Group and Gender, 2019



Note: Figures for male and female may not sum to the total values due to rounding and because they exclude visits with missing or Unknown Gender category. The number of visits with missing or unknown gender in was 36 in FFY 2016, 40 in FFY 2017, 97 in FFY 2018, and 174 in 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

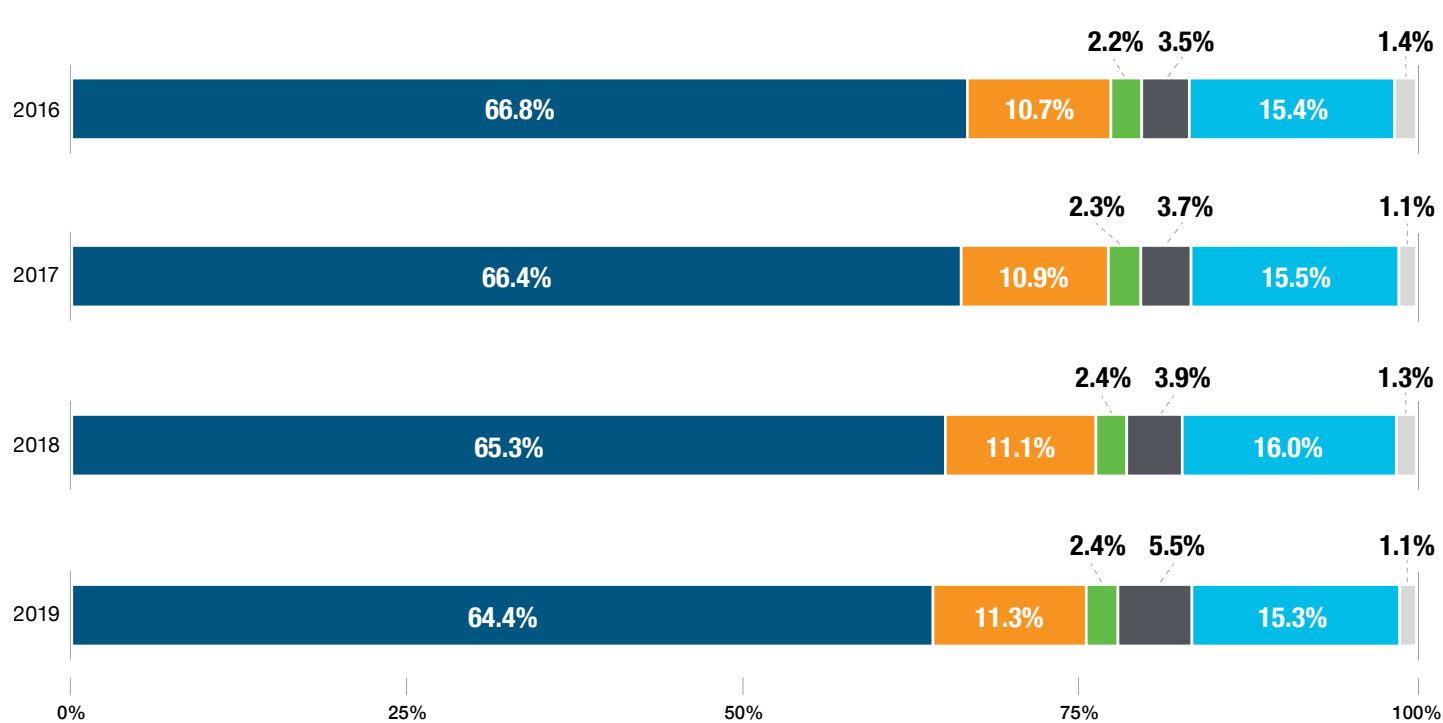
Visits by Expected Primary Payer Type and Age Group, 2019



Note: Analysis includes information on expected primary payer type as provided by the hospital and does not include information on secondary or supplemental payer information. Other insurance includes Worker's Compensation, Other Government Payment, Auto Insurance, and Dental Plans, Self-Pay, Free Care, and Health Safety Net. Figures for expected primary payer type may not sum to the total values due to rounding and because they exclude visits with missing payer type information. The number of visits with missing expected primary payer type was 218 in FFY 2016, 134 in FFY 2017, 84 in FFY 2018, and 274 in 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits by Race/Ethnicity, 2016-2019



Key

- White, non-Hispanic
- Black, non-Hispanic
- Asian, non-Hispanic
- Other or Multiple Races, non-Hispanic
- Hispanic of Any Race
- Missing

	2016	2017	2018	2019
White, non-Hispanic	2,151,478	2,111,195	2,077,151	2,026,430
Black, non-Hispanic	345,449	346,704	353,634	356,356
Asian, non-Hispanic	71,474	74,195	75,180	76,051
Other or Multiple Races, non-Hispanic	114,046	118,743	125,695	172,675
Hispanic of Any Race	495,110	491,792	510,764	480,738
Missing	45,296	34,542	40,509	35,861
Total	3,222,853	3,177,171	3,182,933	3,148,111

Note: Percentages may not sum to 100% due to rounding. More detailed race/ethnicity categories are available in the [databook](#) accompanying this report. For category definitions, see [technical appendix](#).

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

SECTION 3:

Behavioral Health

ED visits among patients seeking care for behavioral health conditions have been of increased interest in health policy research and policy initiatives due to growing volume and long patient stays relative to visits for other conditions.

In this report, visits for behavioral health conditions were defined as visits with a primary diagnosis of either a mental health condition or substance use disorder (for details, see the [technical appendix](#)).

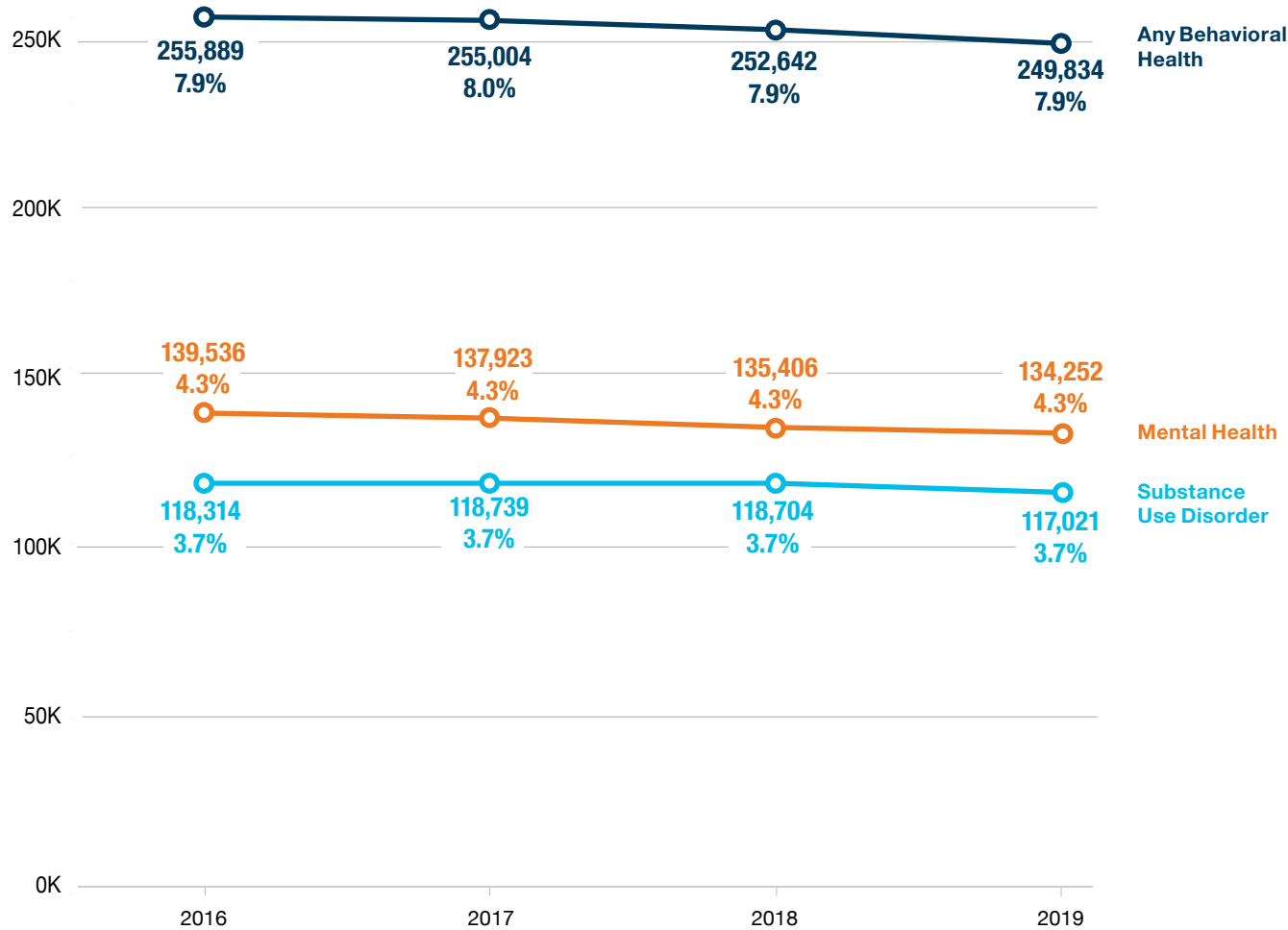
Key Findings:

- Nearly eight percent of ED visits had a primary diagnosis of a behavioral health condition; 4.3% were mental health diagnoses and 3.7% were substance use disorder diagnoses.
- The volumes of mental health and substance use disorder diagnoses remained stable in FFY 2016-2019.
- ED visits with behavioral health primary diagnoses were nearly twice as common among Medicaid patients as among Medicare and commercially insured patients (11.3%, 6.1%, and 6.6%, respectively).
- Adults aged 18-44 had the highest proportion of ED visits with behavioral health primary diagnoses; over one in ten visits had a behavioral health primary diagnosis (11.5%). The highest rate of mental health primary diagnoses was also among patients aged 18-44, while the highest rate of substance use disorder primary diagnoses was among patients aged 45-64.
- Behavioral health-related ED visits were more common among male patients (10.0%) than female patients (6.1%). Among visits for male patients, substance use disorders were more common than mental health conditions, whereas the reverse was true for visits for female patients.

- Behavioral health-related ED visits were more common among non-Hispanic American Indian/Alaska Native (9.1%) and non-Hispanic White patients (8.6%) than other race/ethnicity groups (5.1-7.9%).

- Metro Boston and Western Massachusetts had the highest proportions of ED visits with behavioral health primary diagnoses (8.7% and 8.2%, respectively).

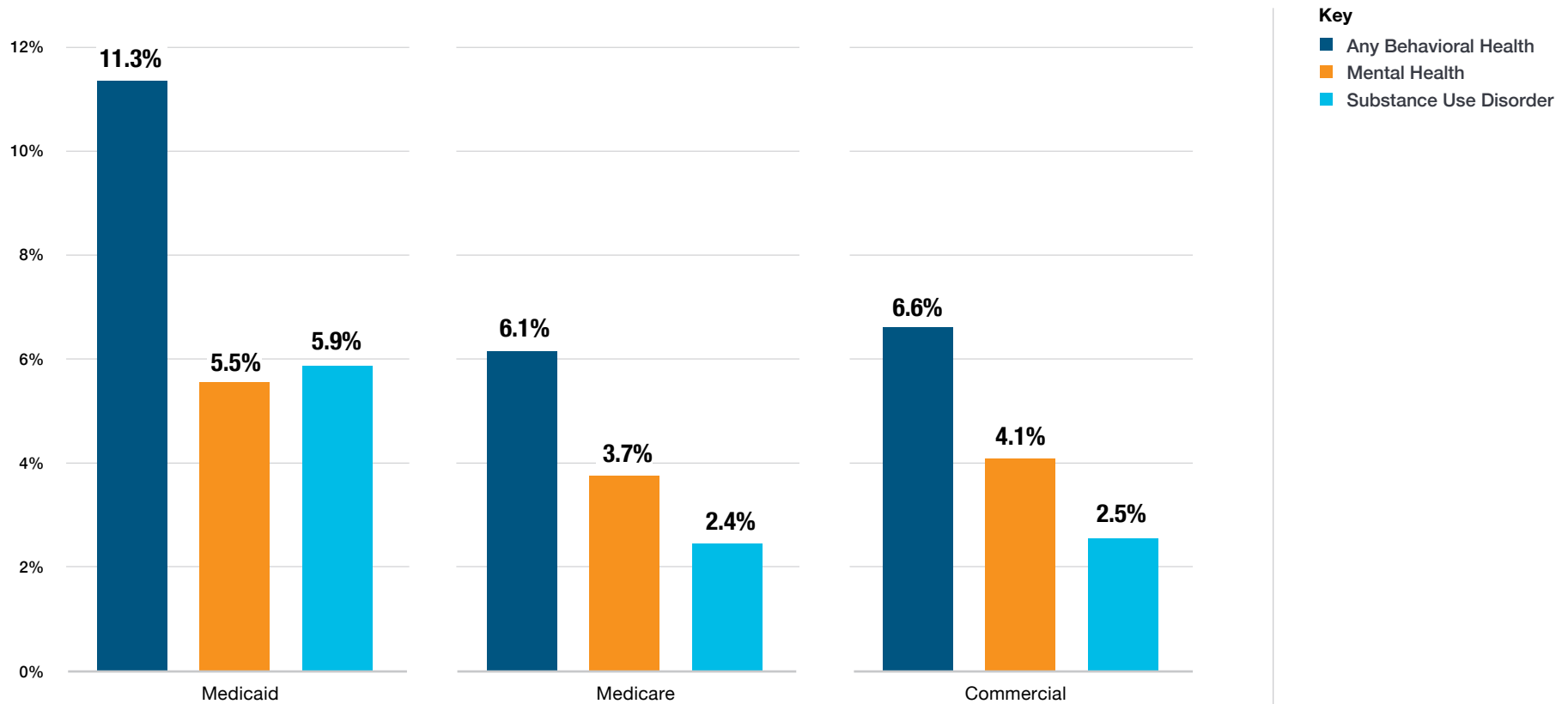
Visits with Behavioral Health Primary Diagnoses, 2016-2019



Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits with Behavioral Health Primary Diagnoses by Expected Primary Payer Type, 2019



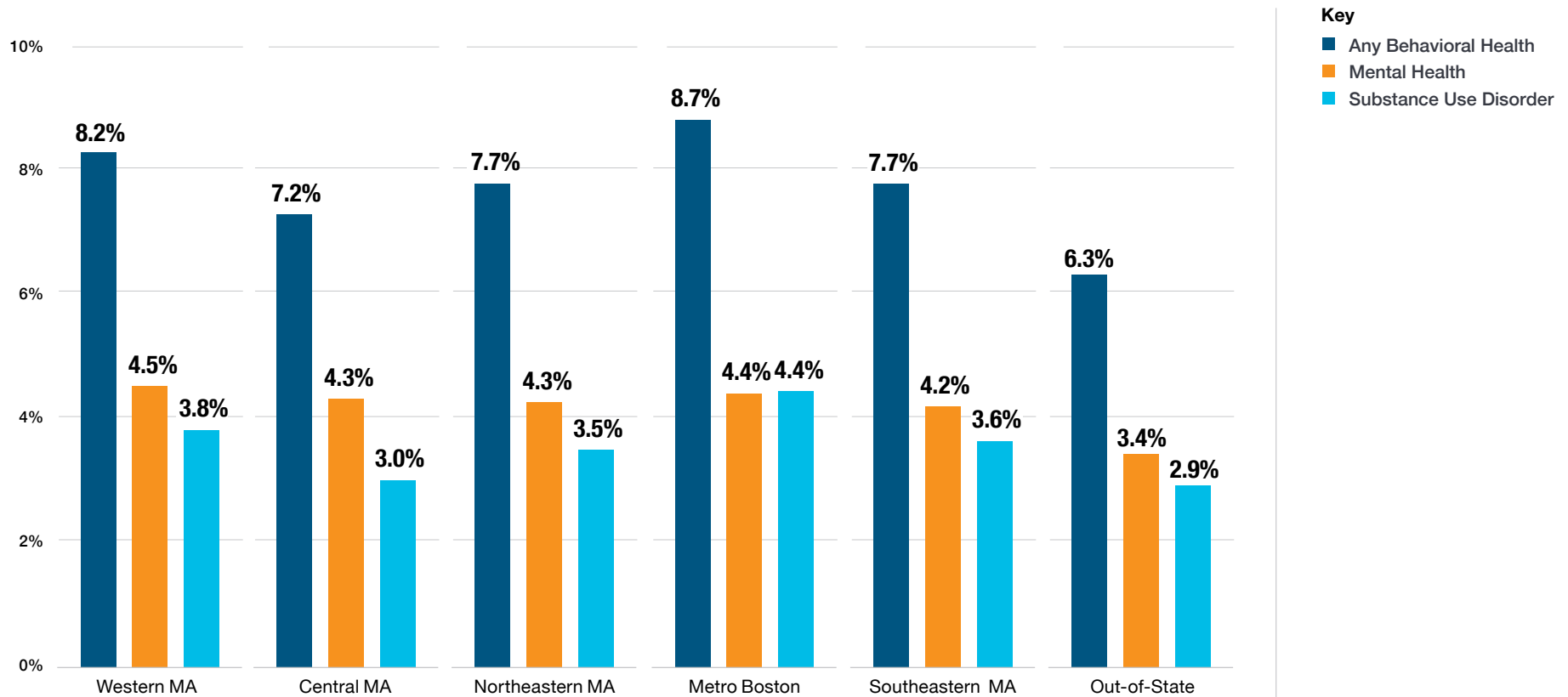
Key

- Any Behavioral Health
- Mental Health
- Substance Use Disorder

Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits with Behavioral Health Primary Diagnoses by Patient EMS Region, 2019



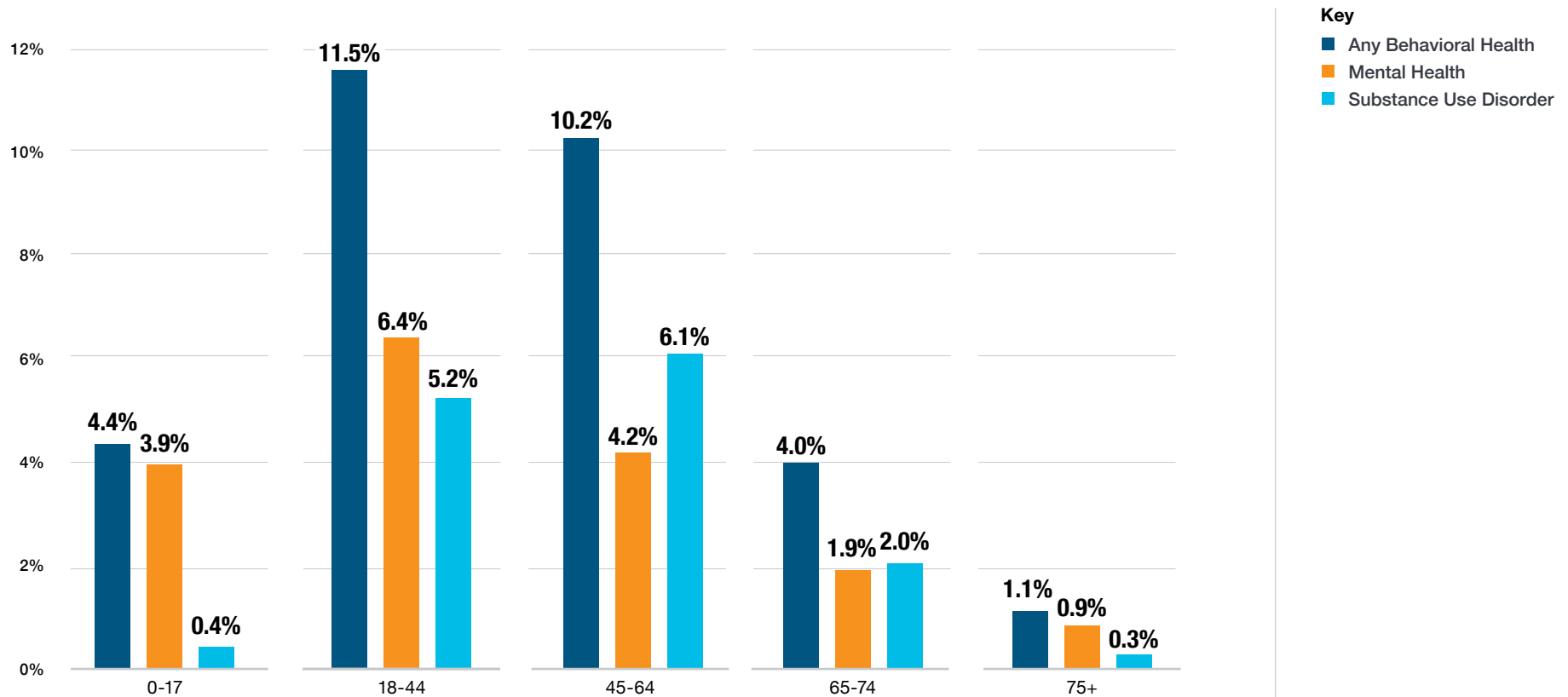
Key

- Any Behavioral Health
- Mental Health
- Substance Use Disorder

Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits with Behavioral Health Primary Diagnoses by Age Group, 2019



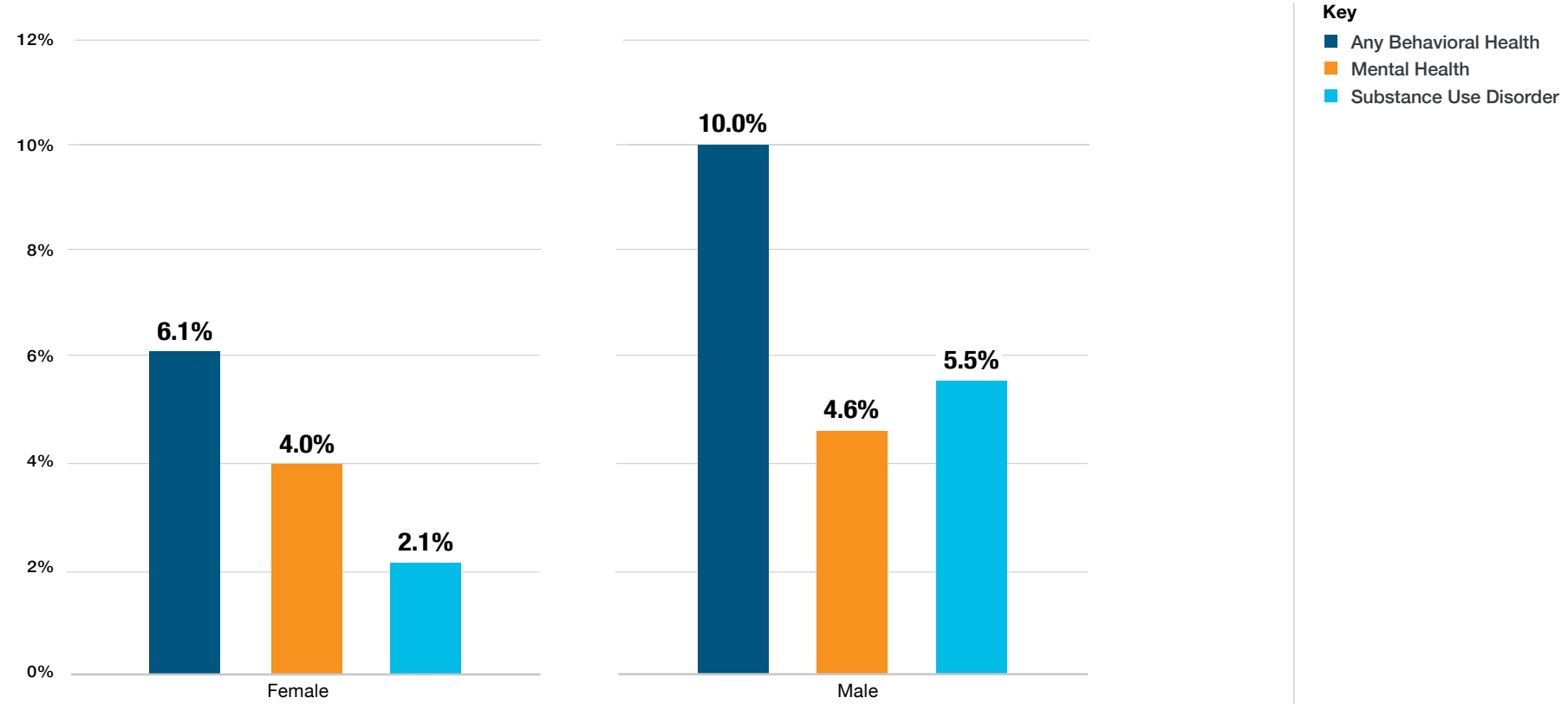
Key

- Any Behavioral Health
- Mental Health
- Substance Use Disorder

Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits with Behavioral Health Primary Diagnoses by Gender, 2019



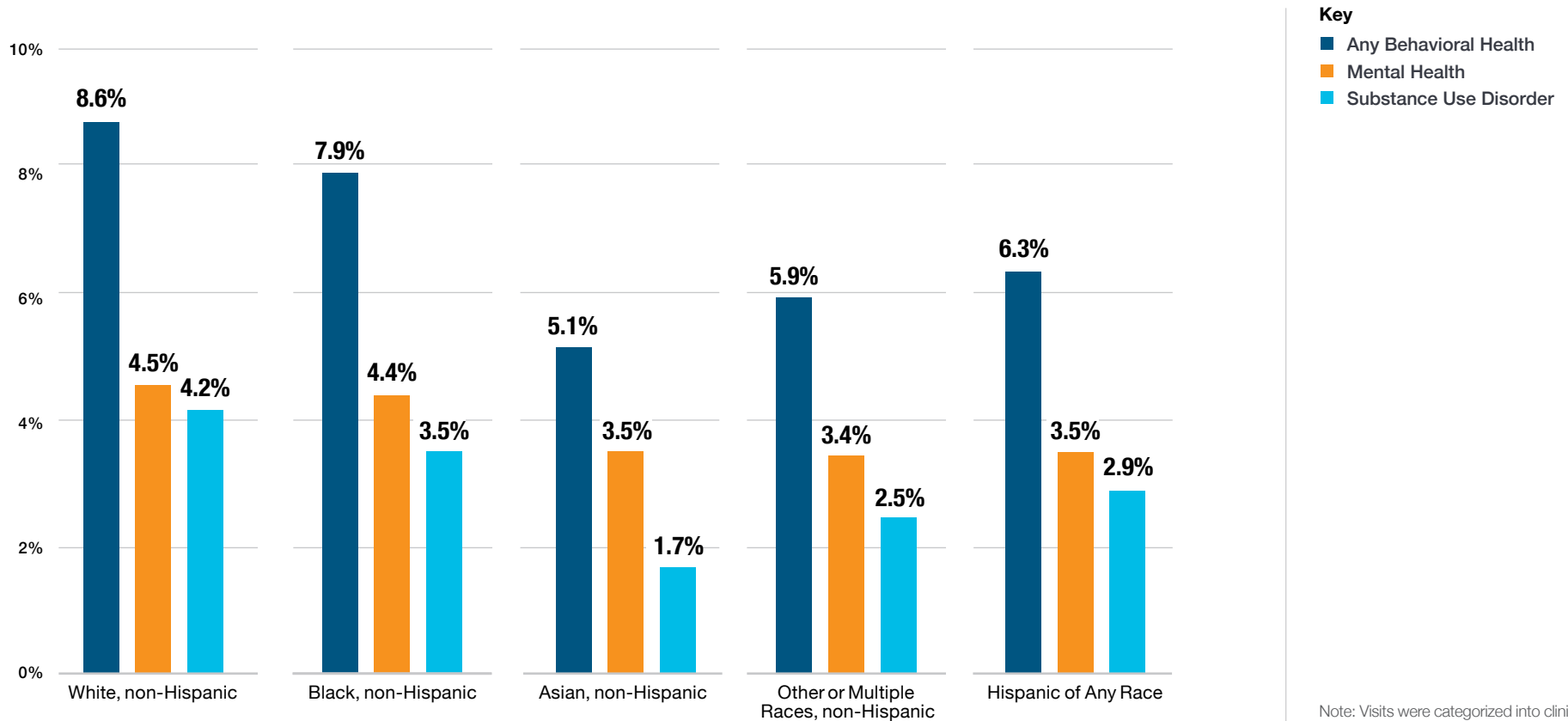
Key

- Any Behavioral Health
- Mental Health
- Substance Use Disorder

Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

Visits with Behavioral Health Primary Diagnoses by Race/Ethnicity, 2019



Key

- Any Behavioral Health
- Mental Health
- Substance Use Disorder

Note: Visits were categorized into clinically meaningful independent behavioral health categories based on primary diagnosis codes using the CCSR categories for ICD-10-CM diagnoses. Since some diagnosis codes are associated with more than one CCSR category, a visit may be associated with more than one behavioral health category. For more information, see the [technical appendix](#). More detailed race/ethnicity categories are available in the [databook](#) accompanying this report.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2016-2019.

SECTION 4:

Frequent Utilizers

Frequent utilization of the ED may reflect many factors, including health care coverage and access, health status, social risk, and other factors. In this report, patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization (for details, see the [technical appendix](#)).

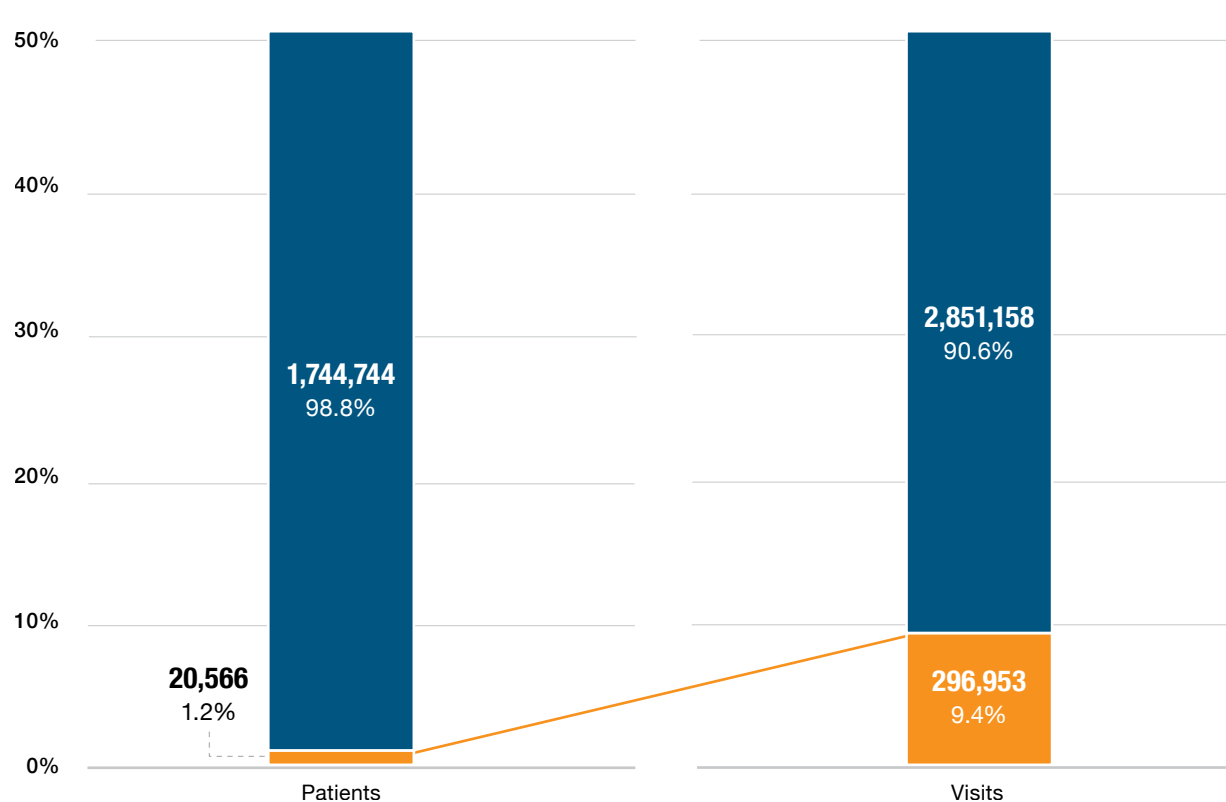
Key Findings:

- Patients with a history of frequent ED use represented 1.2% of ED patients and accounted for 9.4% of all ED visits.
- Medicaid and Medicare patients were much more likely to be identified as frequent ED utilizers than patients

with commercial insurance (2.0%, 1.9%, and 0.3% respectively).

- Adults aged 45-64 represented the highest proportion of frequent ED utilizers by age group.
- Non-Hispanic Black patients represented the highest proportion of frequent ED utilizers by race/ethnicity.
- Male patients were slightly more likely than female patients to be classified as frequent utilizers (1.3% vs. 1.1%).
- A higher share of patients in Western Massachusetts (1.6%) and Southeastern Massachusetts (1.3%) were classified as frequent utilizers compared to other regions in the Commonwealth.

Patients and Visits by Frequent Utilizer Status, 2019



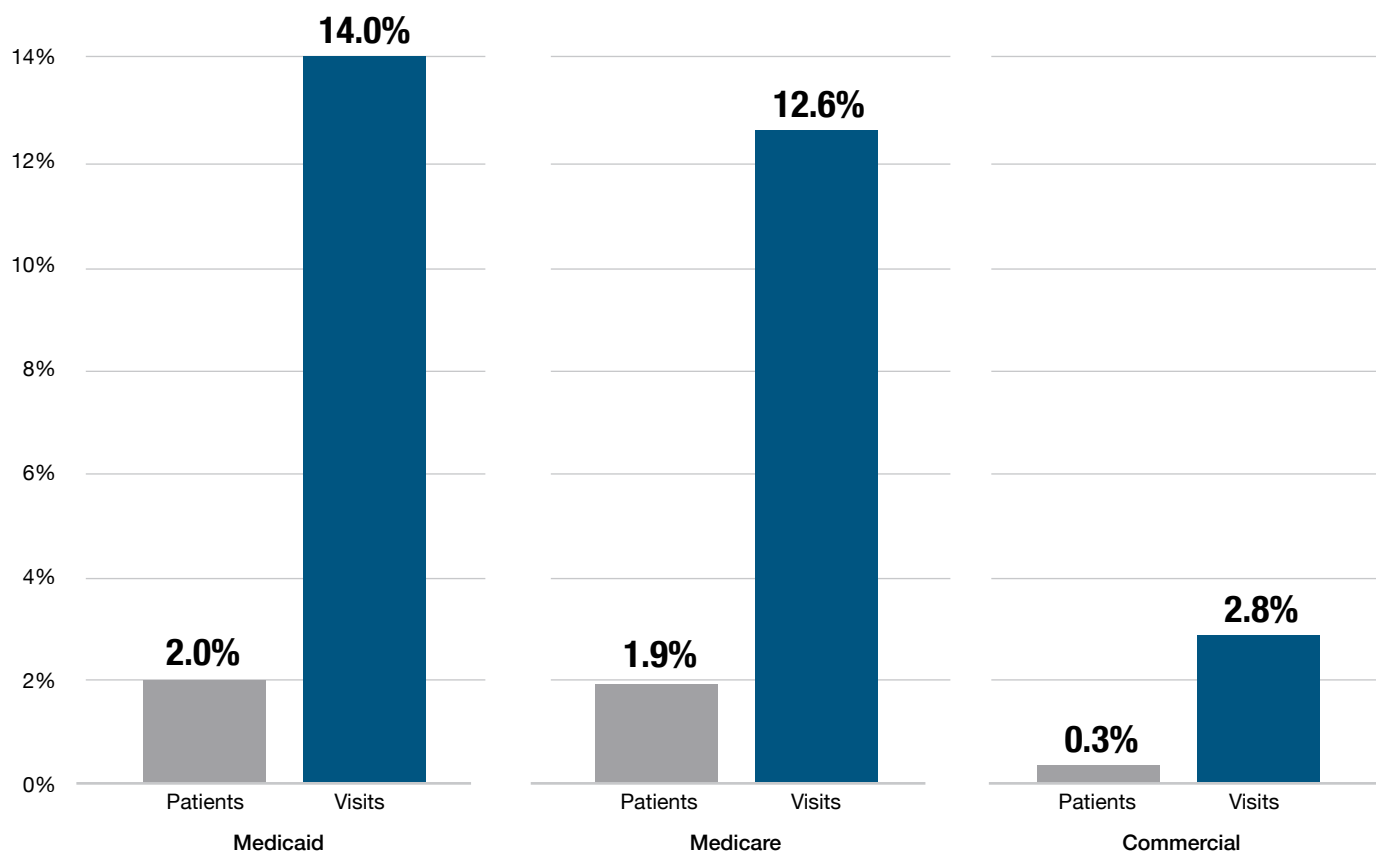
Key

- Not Frequent
- Frequent

Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

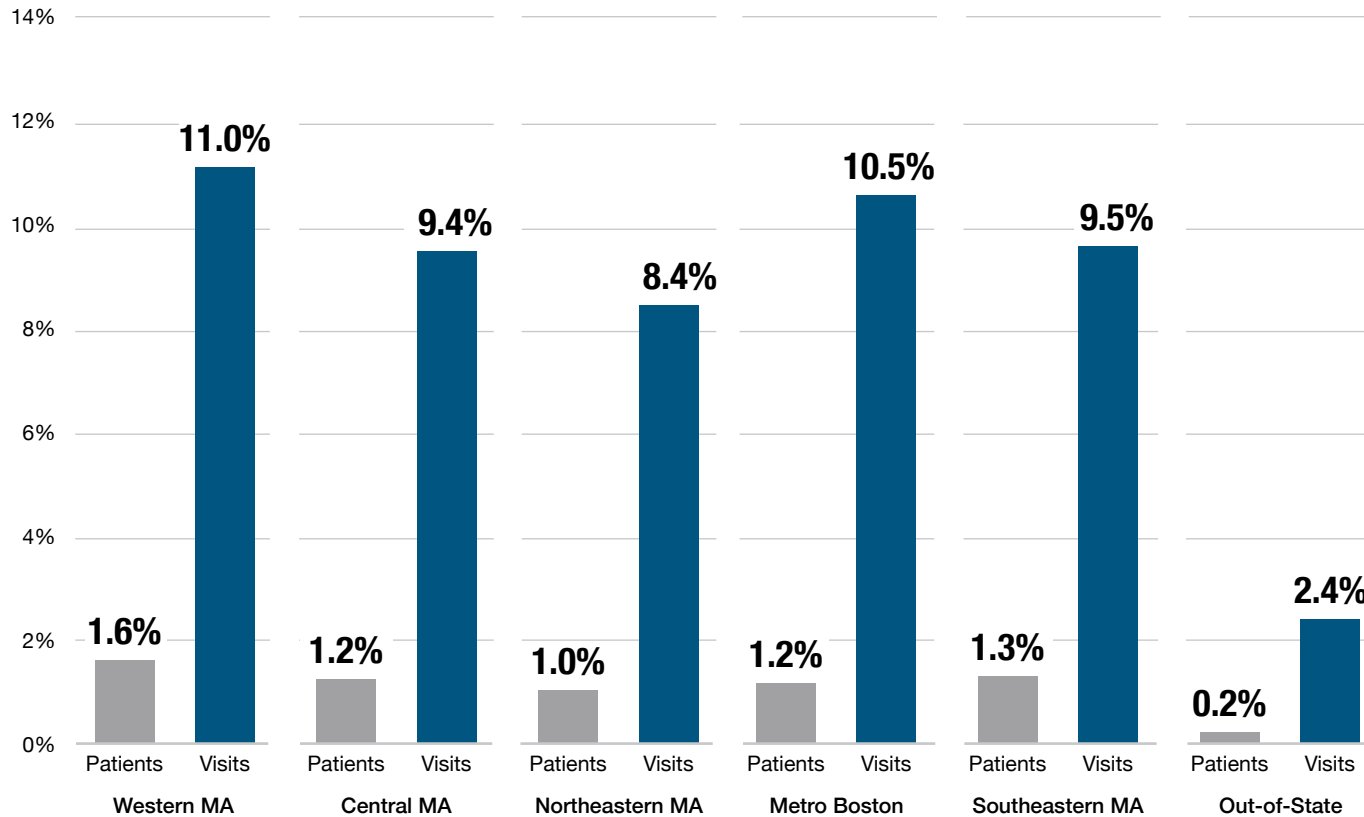
Patients and Visits by Frequent Utilizer Status and Expected Primary Payer Type, 2019



Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. In FFY 2019, 210 ED visits were excluded from the analysis due to missing data. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

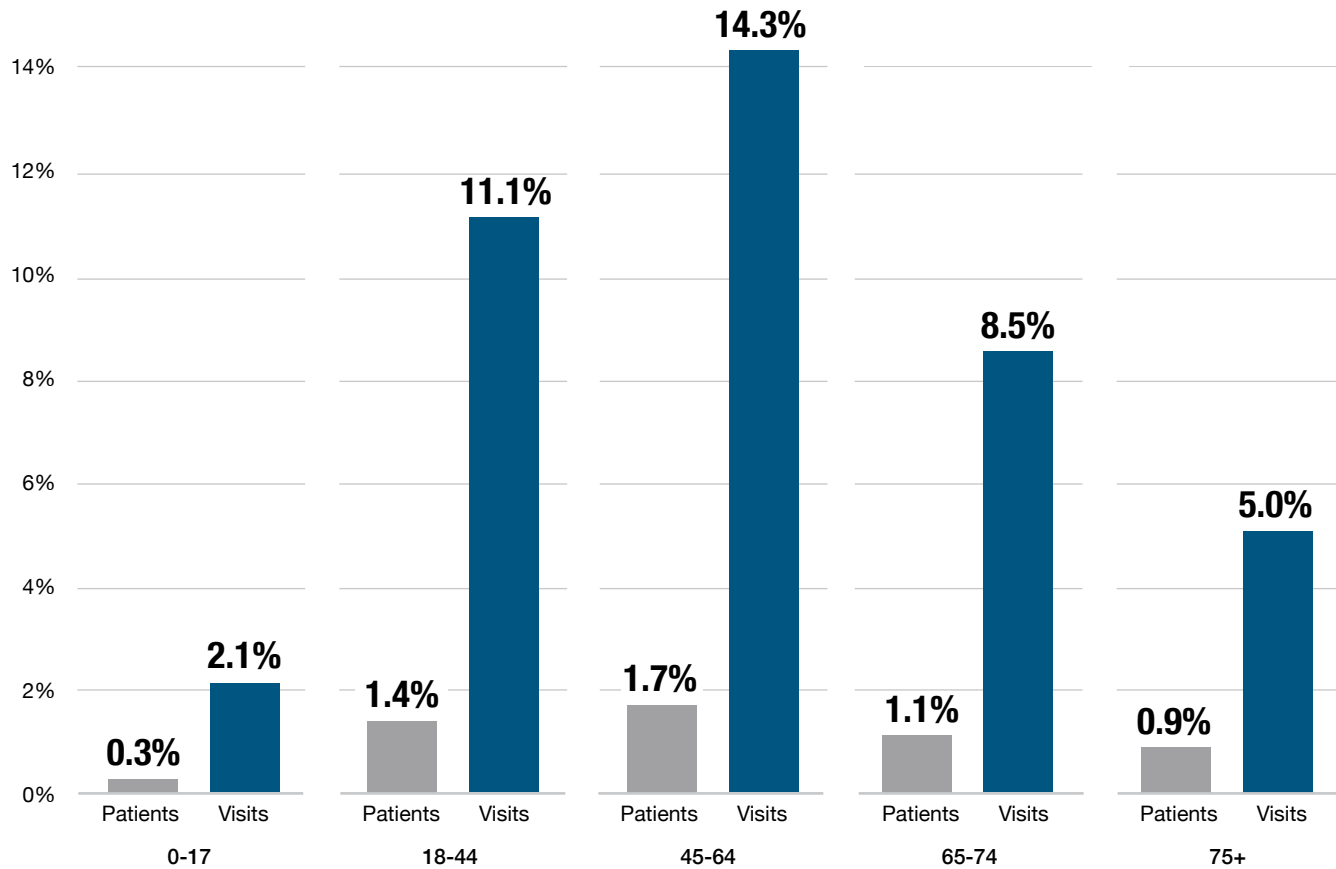
Patients and Visits by Frequent Utilizer Status and Patient EMS Region, 2019



Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. In FFY 2019, 24,212 ED visits were excluded from the analysis due to missing patient residence data. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

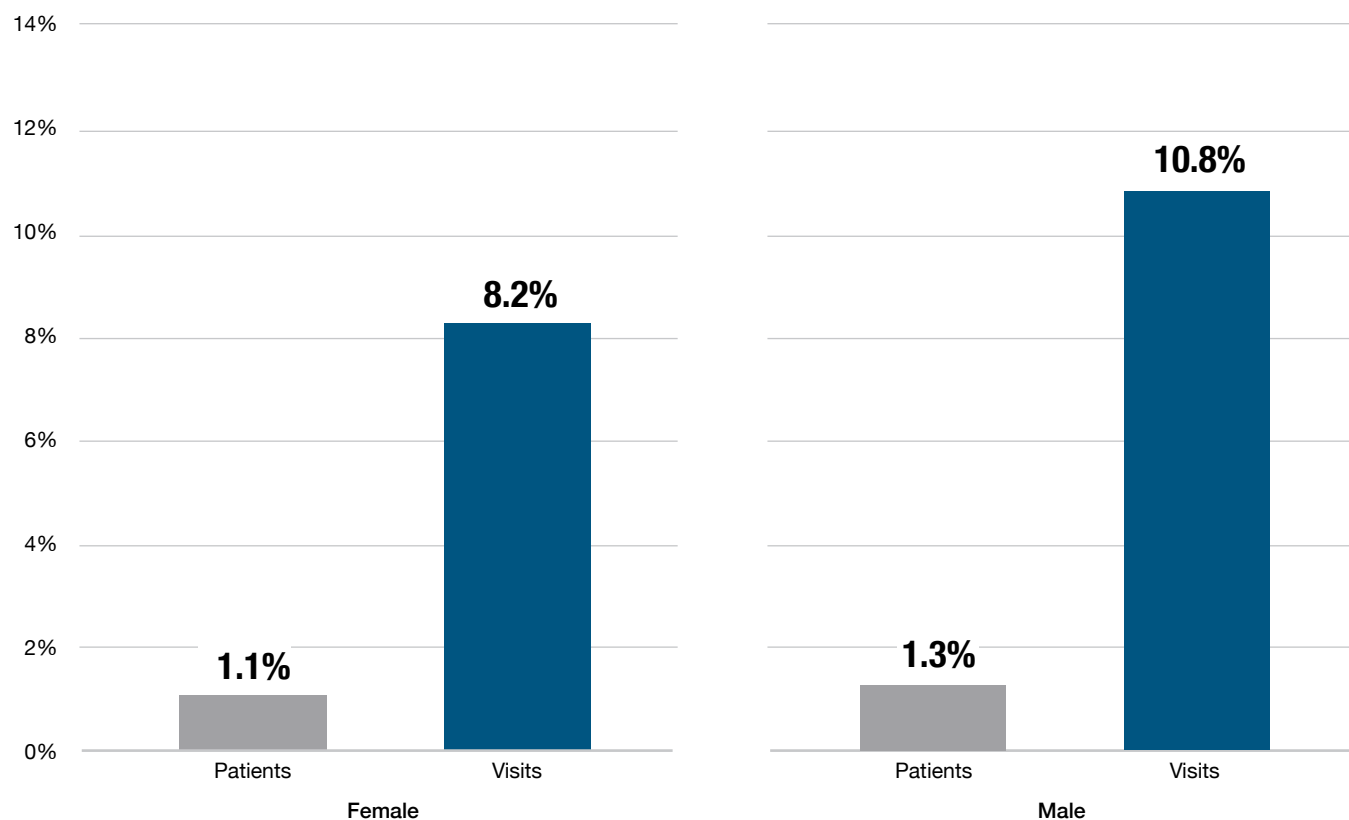
Patients and Visits by Frequent Utilizer Status and Age Group, 2019



Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. In FFY 2019, 299 ED visits were excluded from the analysis due to missing age data. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

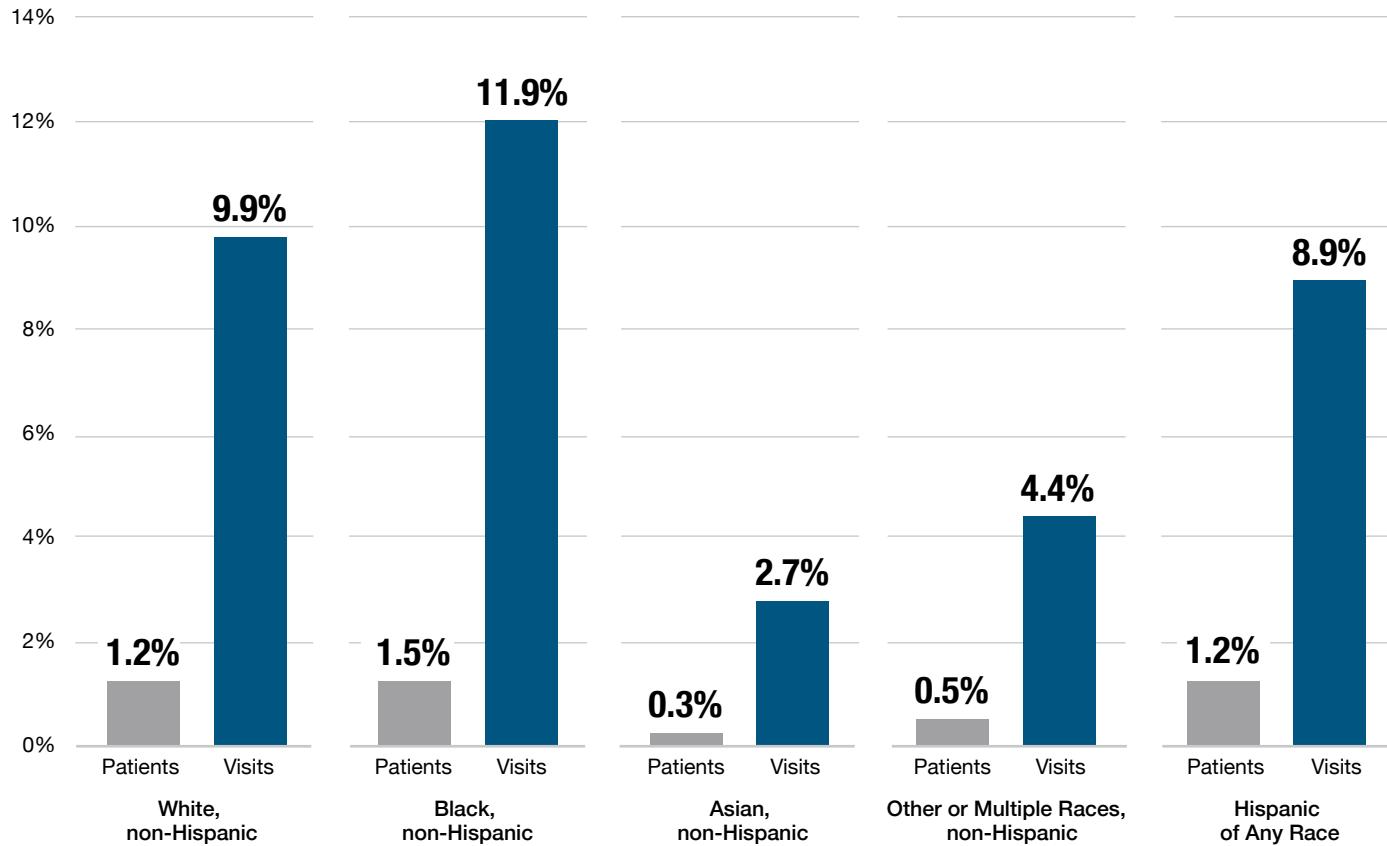
Patients and Visits by Frequent Utilizer Status and Gender, 2019



Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. In FFY 2019, 133 ED visits were excluded from the analysis due to missing or unknown gender data. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

Patients and Visits by Frequent Utilizer Status and Race/Ethnicity, 2019



Note: Patients were identified as frequent utilizers of the ED if they had 10 or more visits in any given 12-month period. If a patient was identified as a frequent utilizer at least once during a given fiscal year, the patient and all their visits in that fiscal year were associated with frequent utilization. 32,658 ED visits were excluded from this analysis due to missing race/ethnicity information. See [technical appendix](#) for more information. More detailed race/ethnicity categories are available in the [databook](#) accompanying this report.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), Hospital Inpatient Discharge Databases (HIDD), and Outpatient Observation Databases (OOD), FFY 2015-2019.

SECTION 5:

Treat-and-Release Visit Characteristics and Utilization

More than three-quarters of ED visits in Massachusetts acute care hospitals are treat-and-release ED visits, in which the visit was associated with neither an inpatient admission nor an observation stay at the same facility. This section provides a deeper look at treat-and-release ED visits, including measures of overall utilization, length of stay, and hospital, visit, and patient characteristics. These include analyses of departure status, diagnoses, and behavioral health conditions. Additionally, this section presents analyses of excess length of stay, defined as a treat-and-release visit that lasted more than four hours from the time of registration, by hospital, visit, and patient characteristics (for details see [technical appendix](#)).

Key Findings:

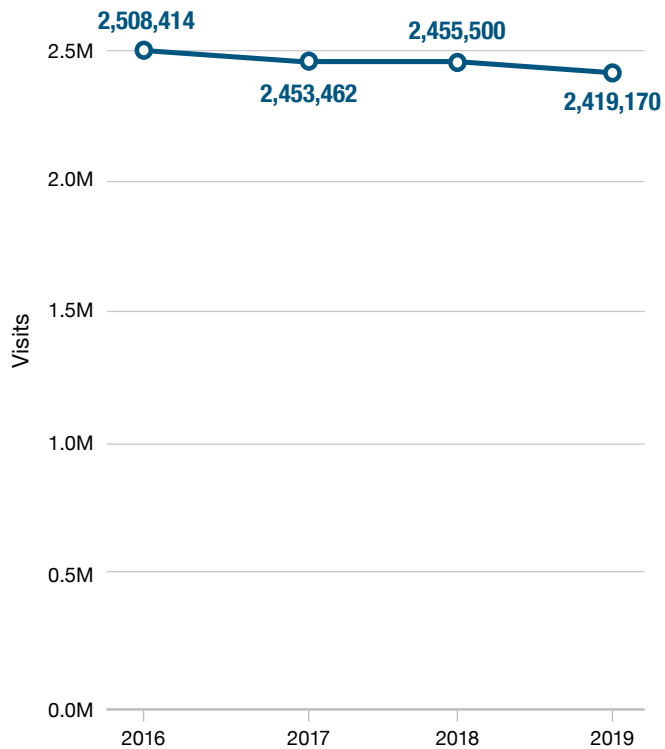
- Treat-and-release visits declined by 3.6% from FFY 2016 to FFY 2019.
- The most frequent diagnoses for treat-and-release visits were abdominal pain and injuries among adults, and upper respiratory infections among children.
- The average length of stay among treat-and-release visits remained stable from FFY 2016 to FFY 2019, at approximately four hours.
- Treat-and-release visits for behavioral health conditions had much longer average length of stay than other types of treat-and-release visits.

- Over thirty-two percent of treat-and-release visits had excess length of stay; this was twice as common among treat-and-release visits with a behavioral health primary diagnosis.
- A higher proportion of visits at Academic Medical Centers had excess lengths of stay compared to other hospital cohorts (46.5% vs. 27.7-33.7%).

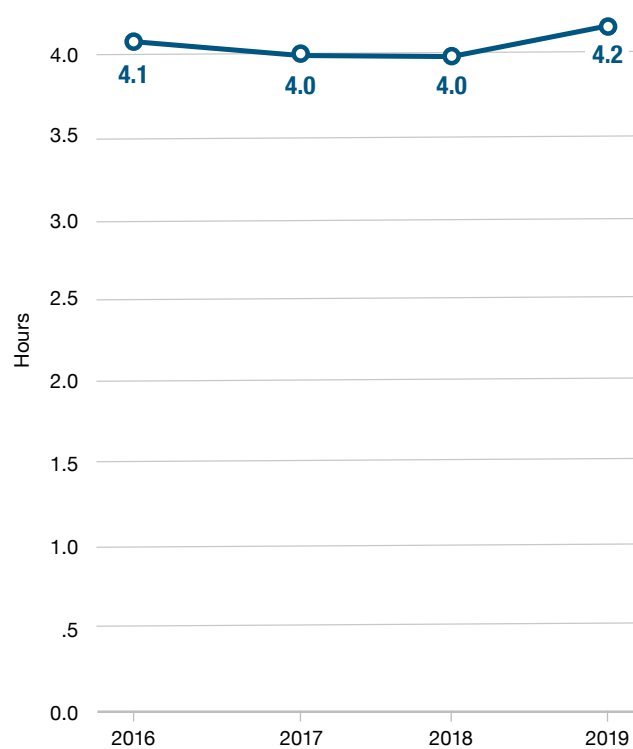
- Excess length of stay increased with patient age and was most common among visits with Medicare as the expected primary payer type. ■

Treat-and-Release Visits: Utilization Overview, 2016-2019

Treat-and-Release Visits, 2016-2019



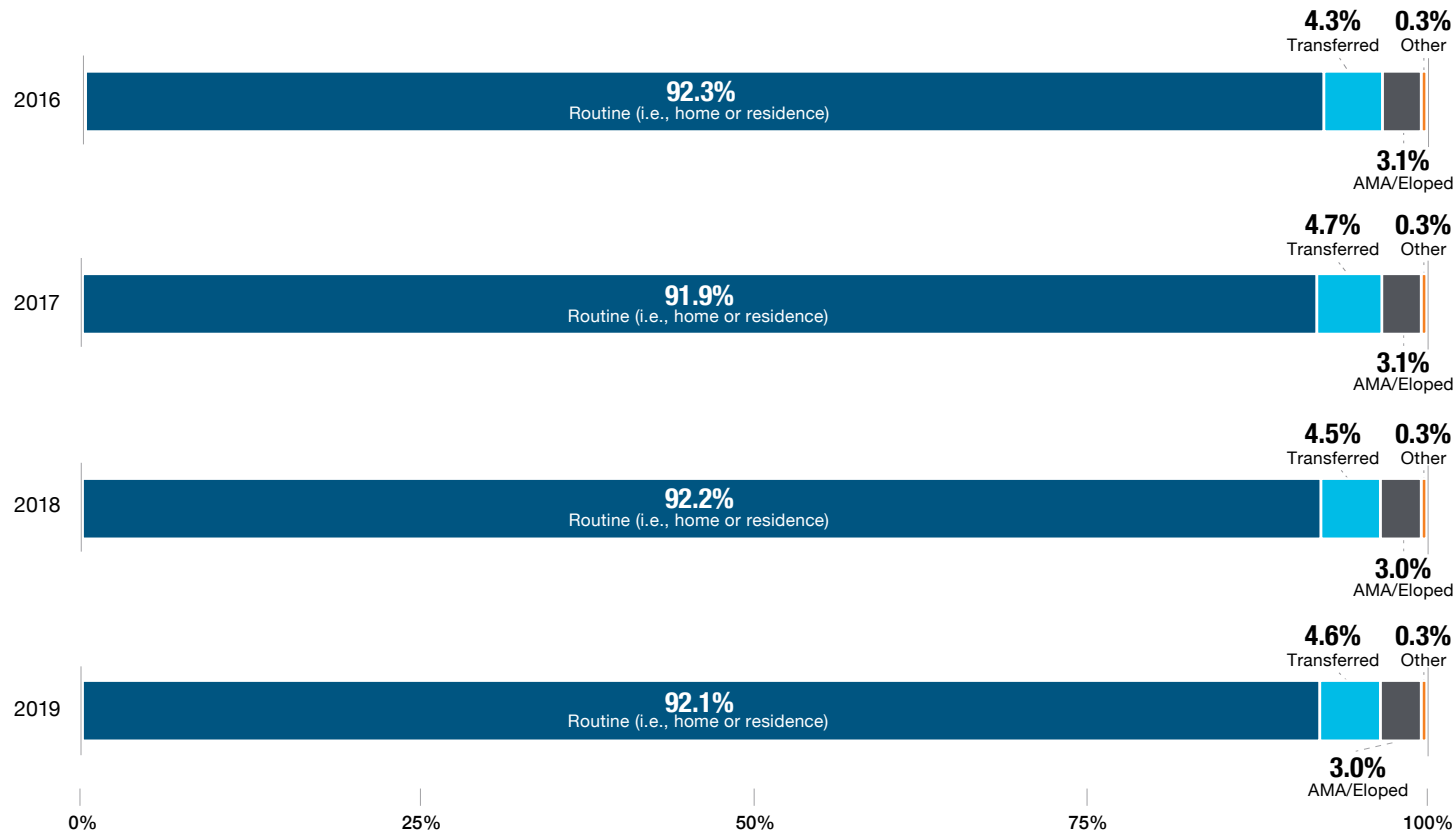
Treat-and-Release Length of Stay (Hours), 2016-2019



Note: Treat-and-release visits are ED visits that do not result in an inpatient admission or an observation stay. Length of stay (LOS) of treat-and-release visits is calculated by subtracting the admission date and time from the departure date and time and is measured in hours. Figures for length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits: Departure Status, 2016-2019

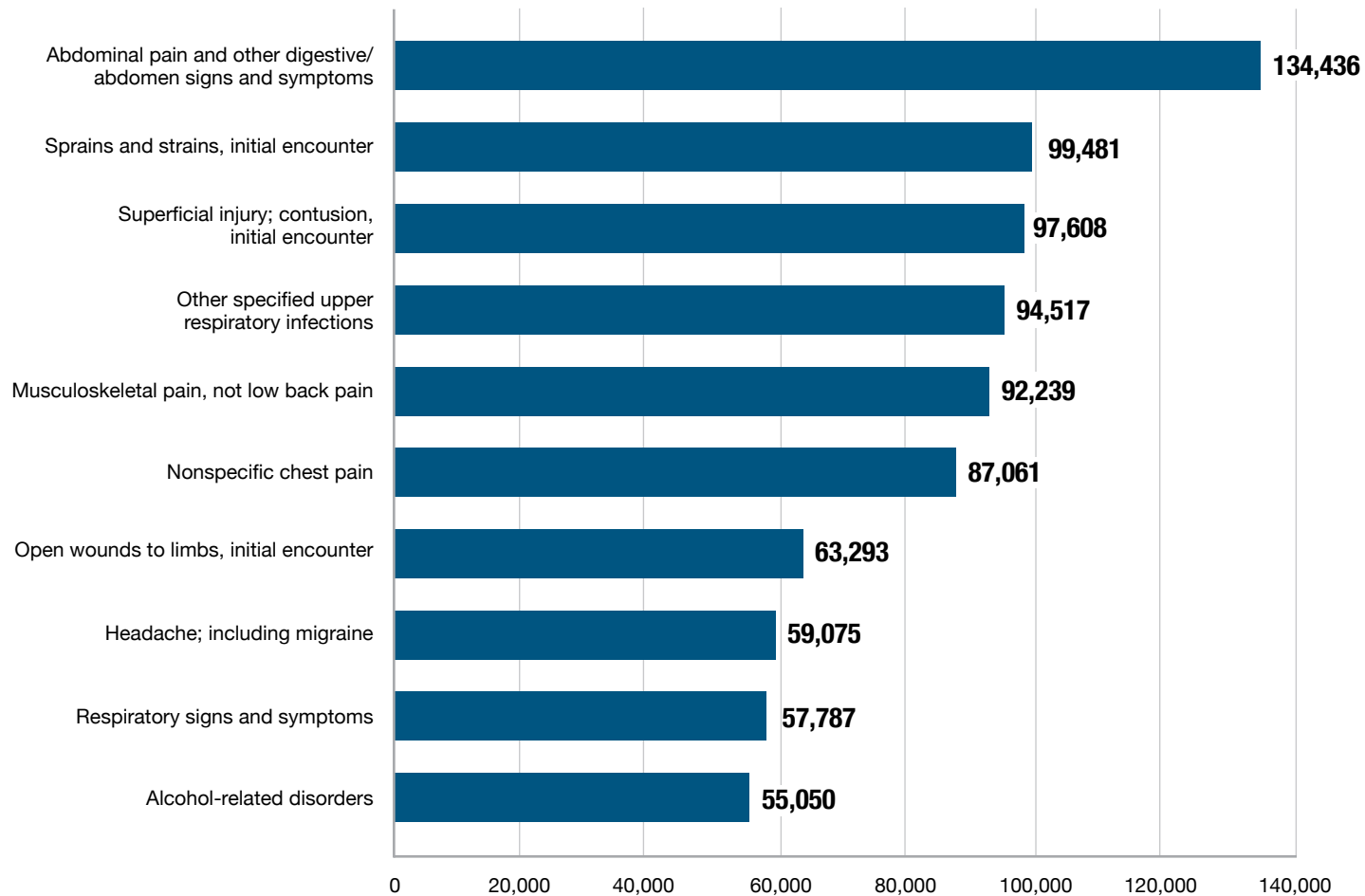


	2016	2017	2018	2019
Routine (i.e., home or residence)	2,316,438	2,255,608	2,263,258	2,227,226
Transferred	108,601	116,262	110,547	111,064
Eloped	52,735	53,205	52,305	49,138
AMA	23,918	21,653	20,928	22,944
Other	6,533	6,577	8,298	7,596
Total	2,508,414	2,453,462	2,455,500	2,419,170

Note: Departure status was classified into one of four categories: Routine (i.e., home or residence), Transferred, Against Medical Advice (AMA) or Eloped, and Other. Other includes died during ED visit, dead on arrival, and within hospital clinic referral. Figures for departure status may not sum to the total values due to rounding and because they exclude visits with missing departure status information. The number of visits with missing departure status was 189 in FFY 2016, 157 in FFY 2017, 164 in FFY 2018, and 1,202 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits: Most Common Primary CCSR Diagnoses, 2019

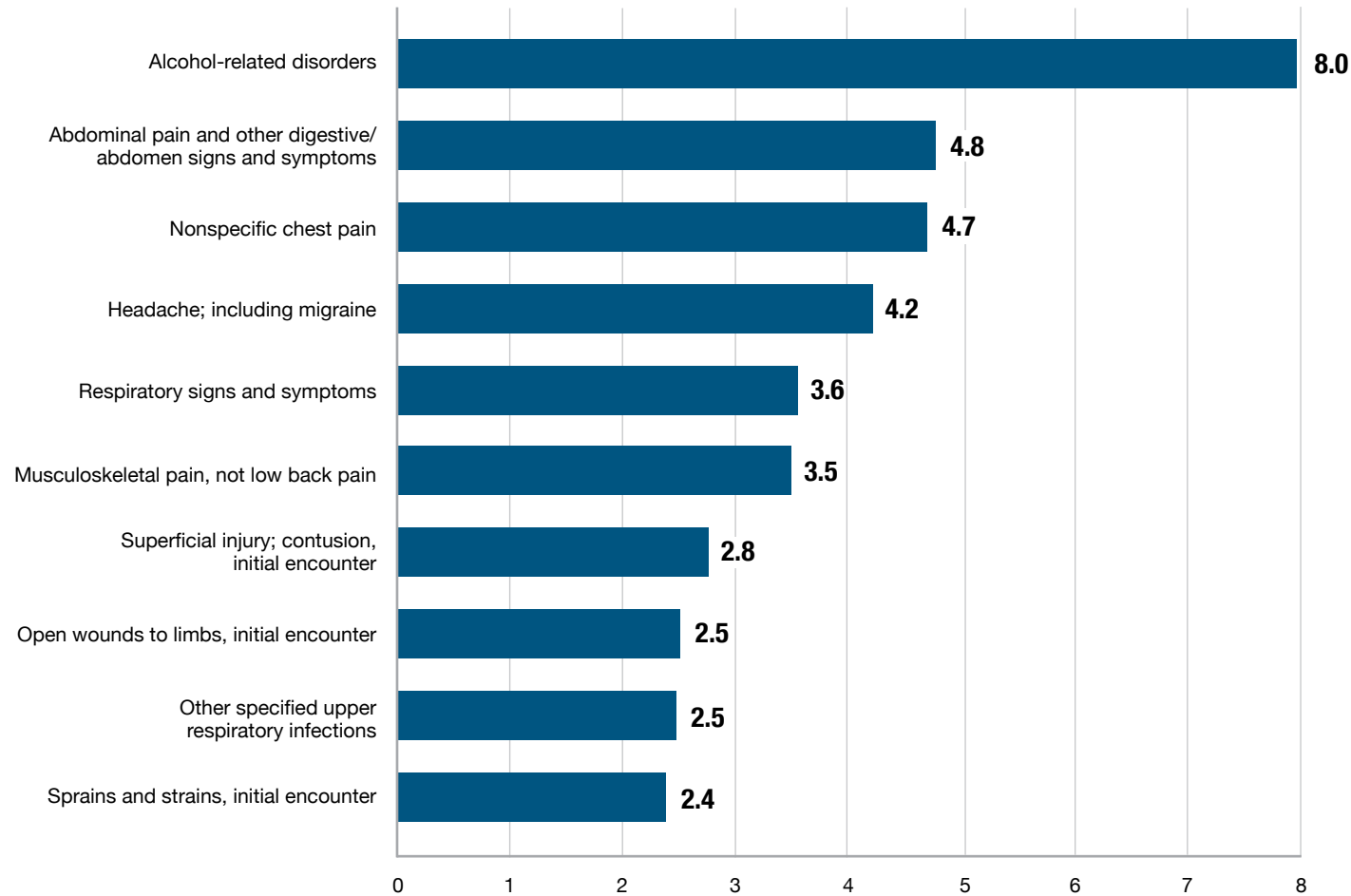


Note: For this analysis, visits were categorized into clinically meaningful mutually exclusive categories based on the listed primary diagnosis code using the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses developed by the Agency for Healthcare Research and Quality (AHRQ). See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits:

Length of Stay among Most Common Primary CCSR Diagnoses, 2019



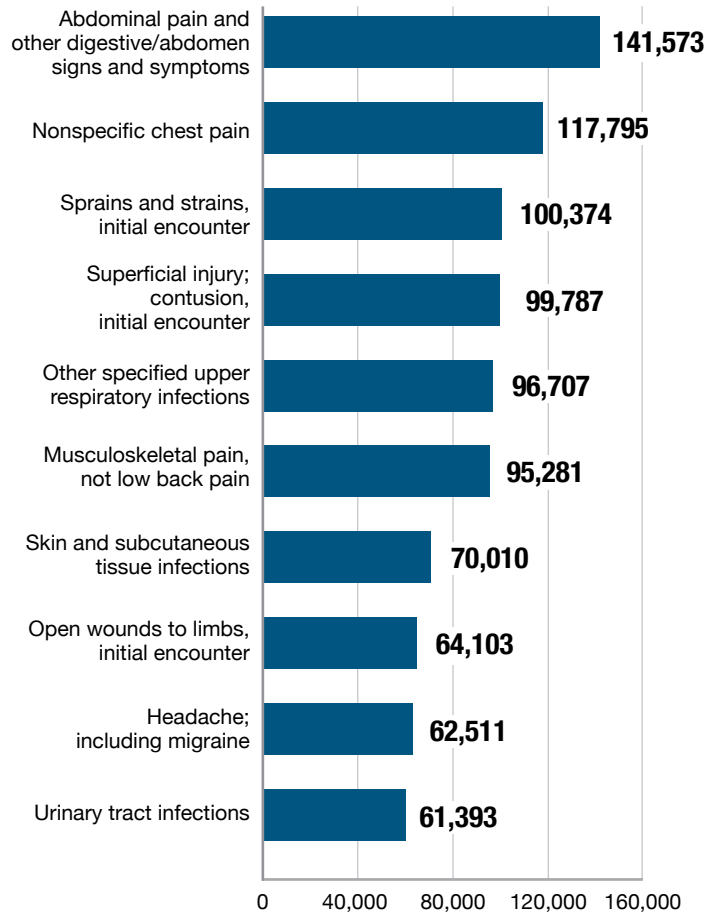
Note: Length of stay (LOS) of treat-and-release visits is calculated by subtracting the admission date and time from the departure date and time and is measured in hours. Figures for length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date or removal was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

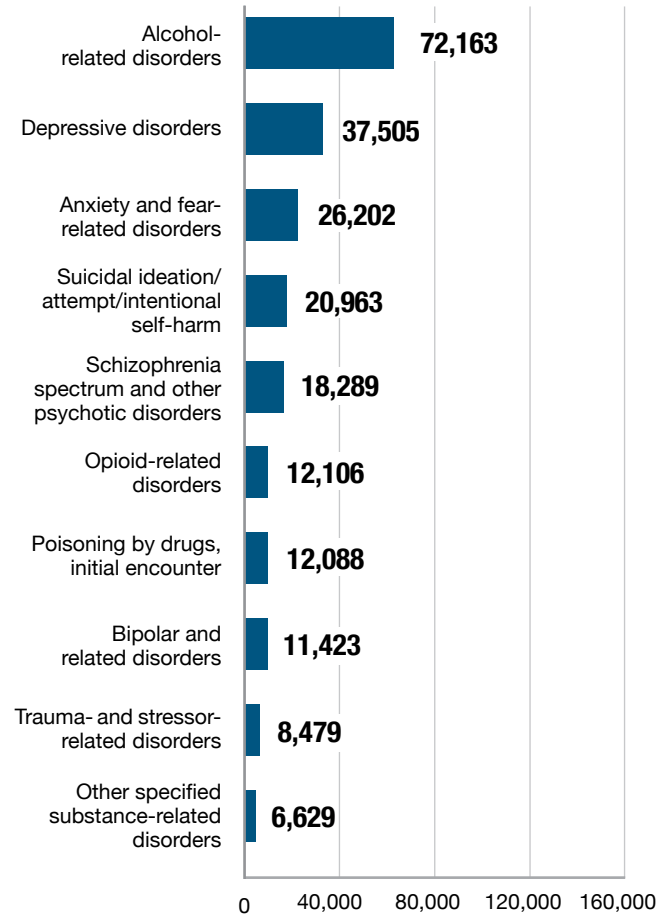
Treat-and-Release Visits:

Most Common Non-Behavioral Health and Behavioral Health Primary CCSR Diagnoses, 2019

Non-Behavioral Health



Behavioral Health



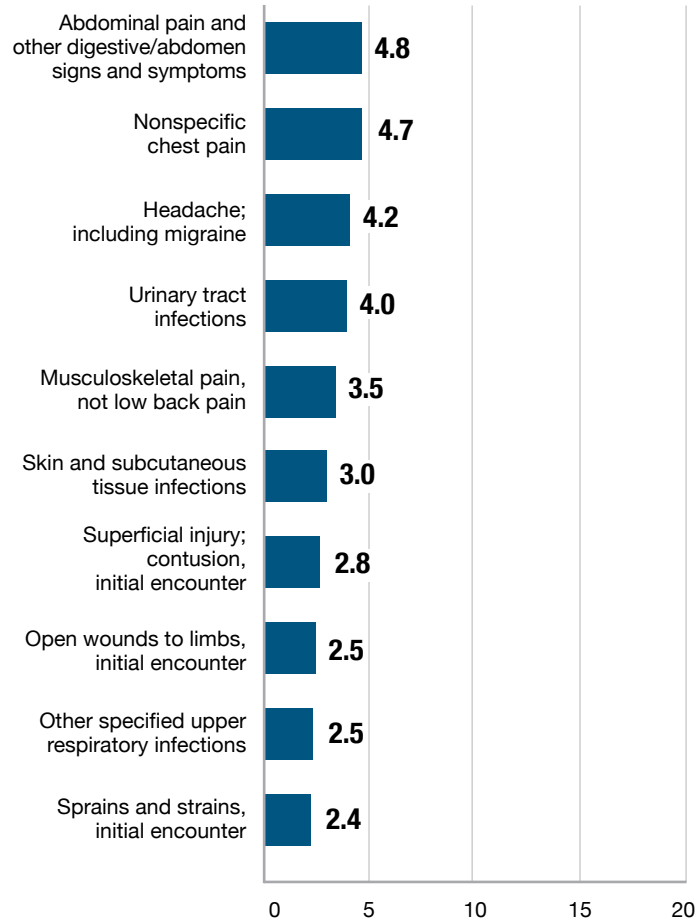
Note: For this analysis, visits were categorized into clinically meaningful mutually exclusive categories based on the listed primary diagnosis code using the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses developed by the Agency for Healthcare Research and Quality (AHRQ). See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

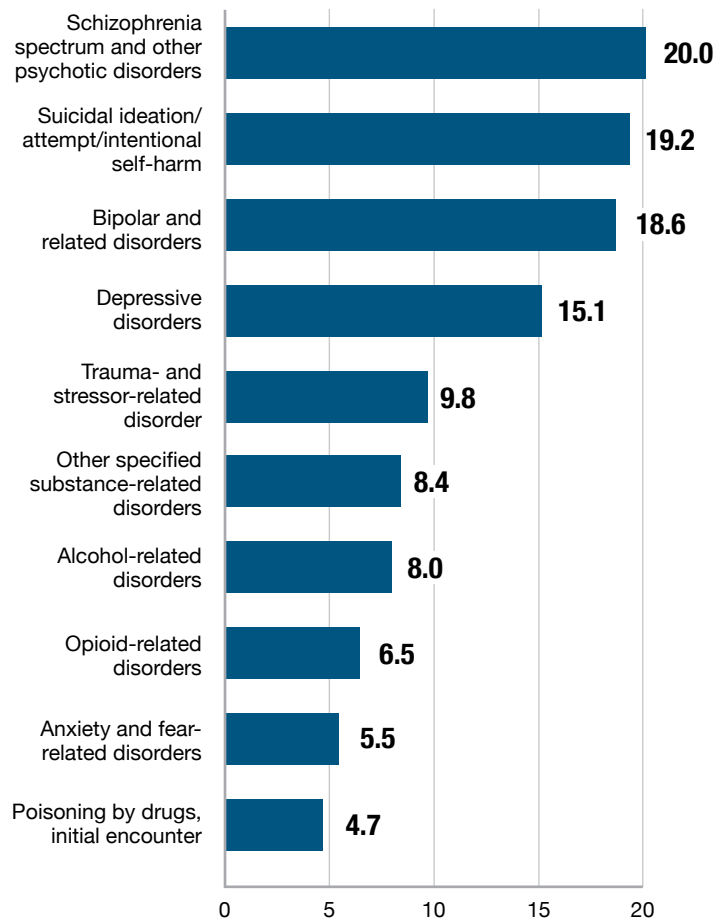
Treat-and-Release Visits:

Length of Stay among Most Common Non-Behavioral Health and Behavioral Health Primary CCSR Diagnoses, 2019

Non-Behavioral Health



Behavioral Health

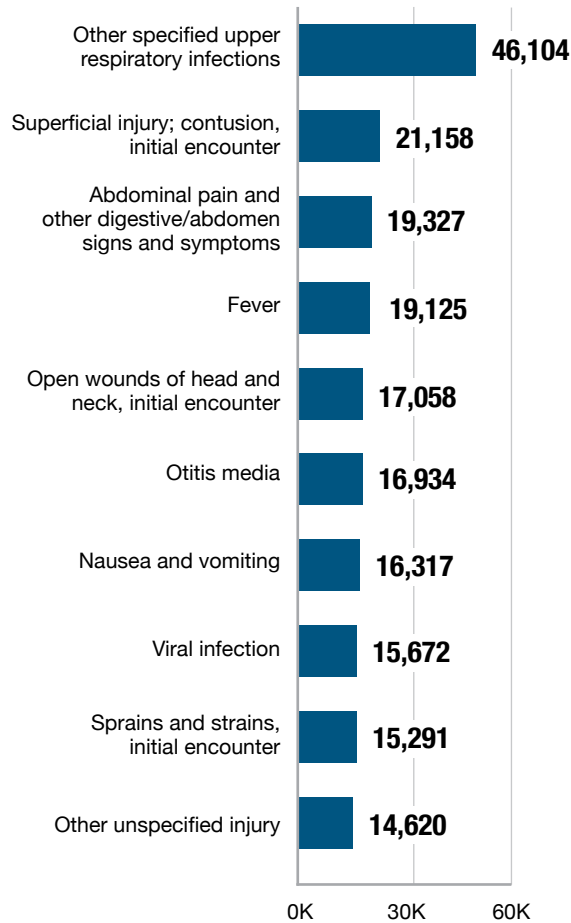


Note: Length of stay (LOS) of treat-and-release visits is calculated by subtracting the admission date and time from the departure date and time and is measured in hours. Figures for length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date or removal was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

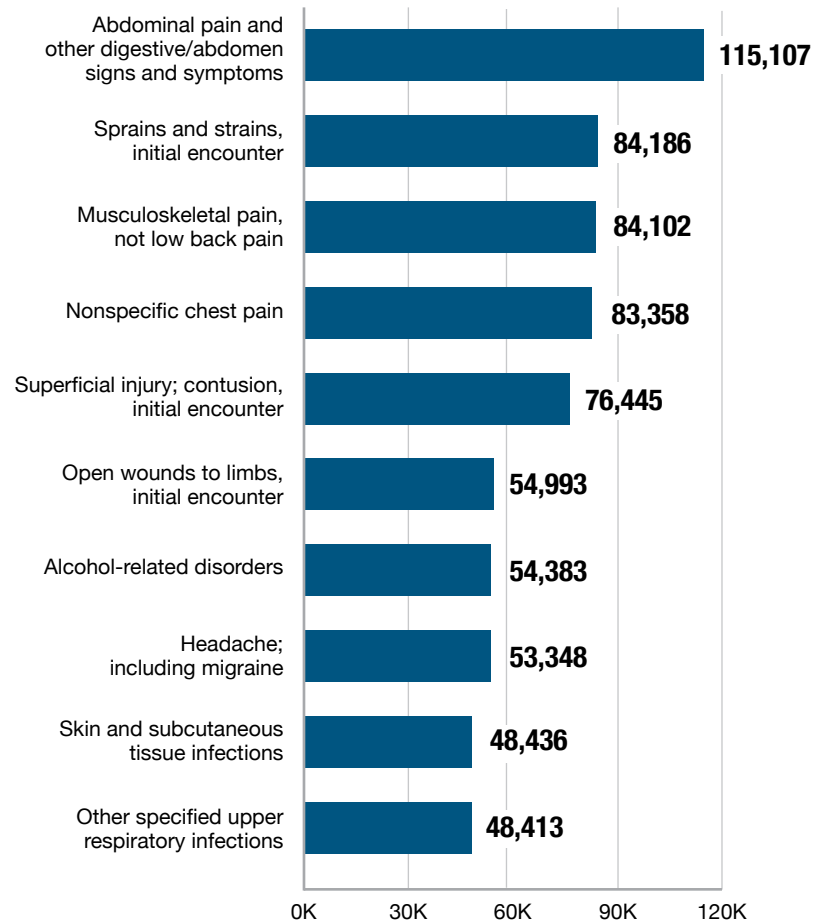
Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits: Most Common Primary CCSR Diagnoses by Age Group, 2019

Age 0-17



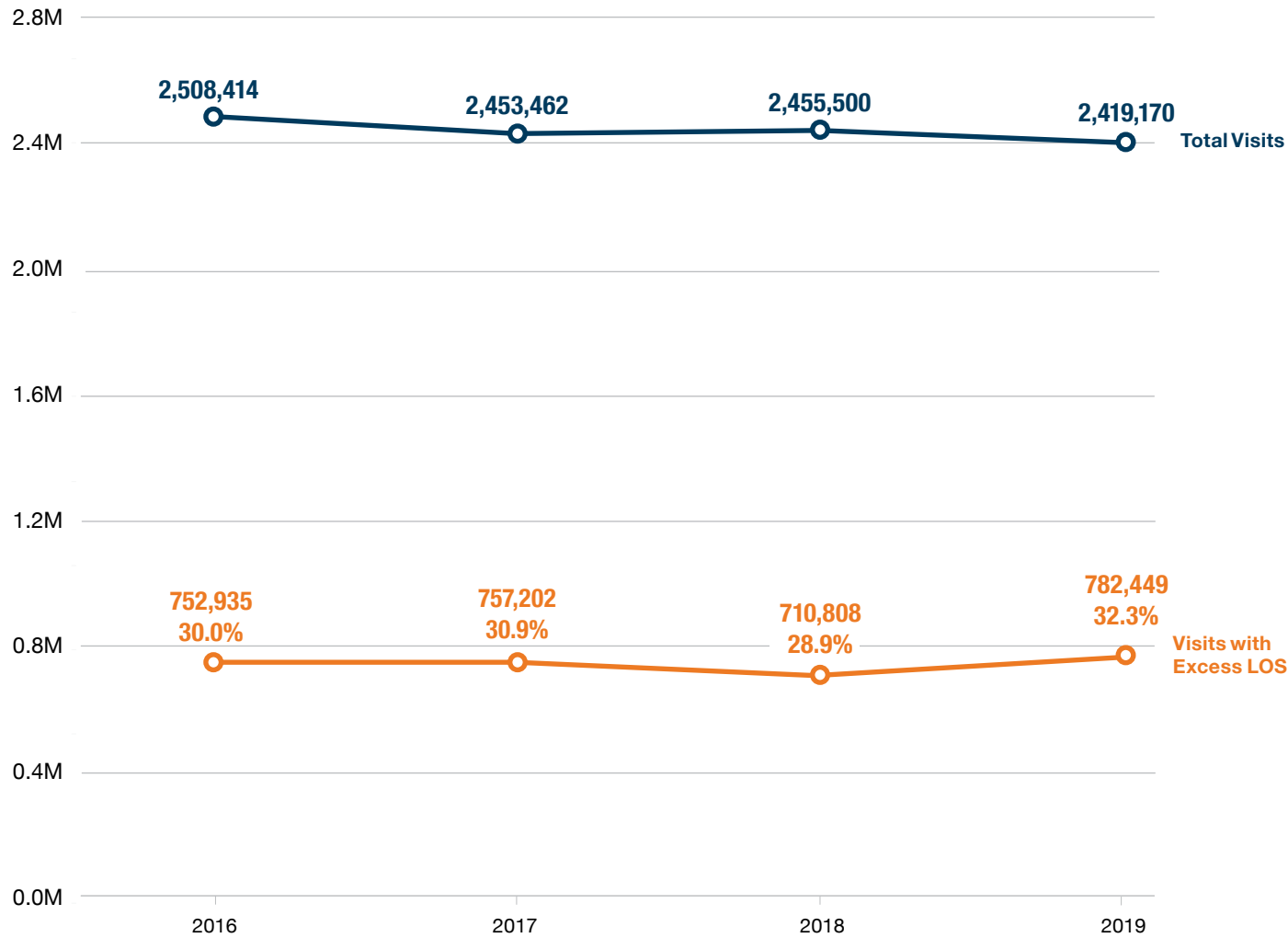
Age 18+



Note: For this analysis, visits were categorized into clinically meaningful mutually exclusive categories based on the listed primary diagnosis code using the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses developed by the Agency for Healthcare Research and Quality (AHRQ). See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

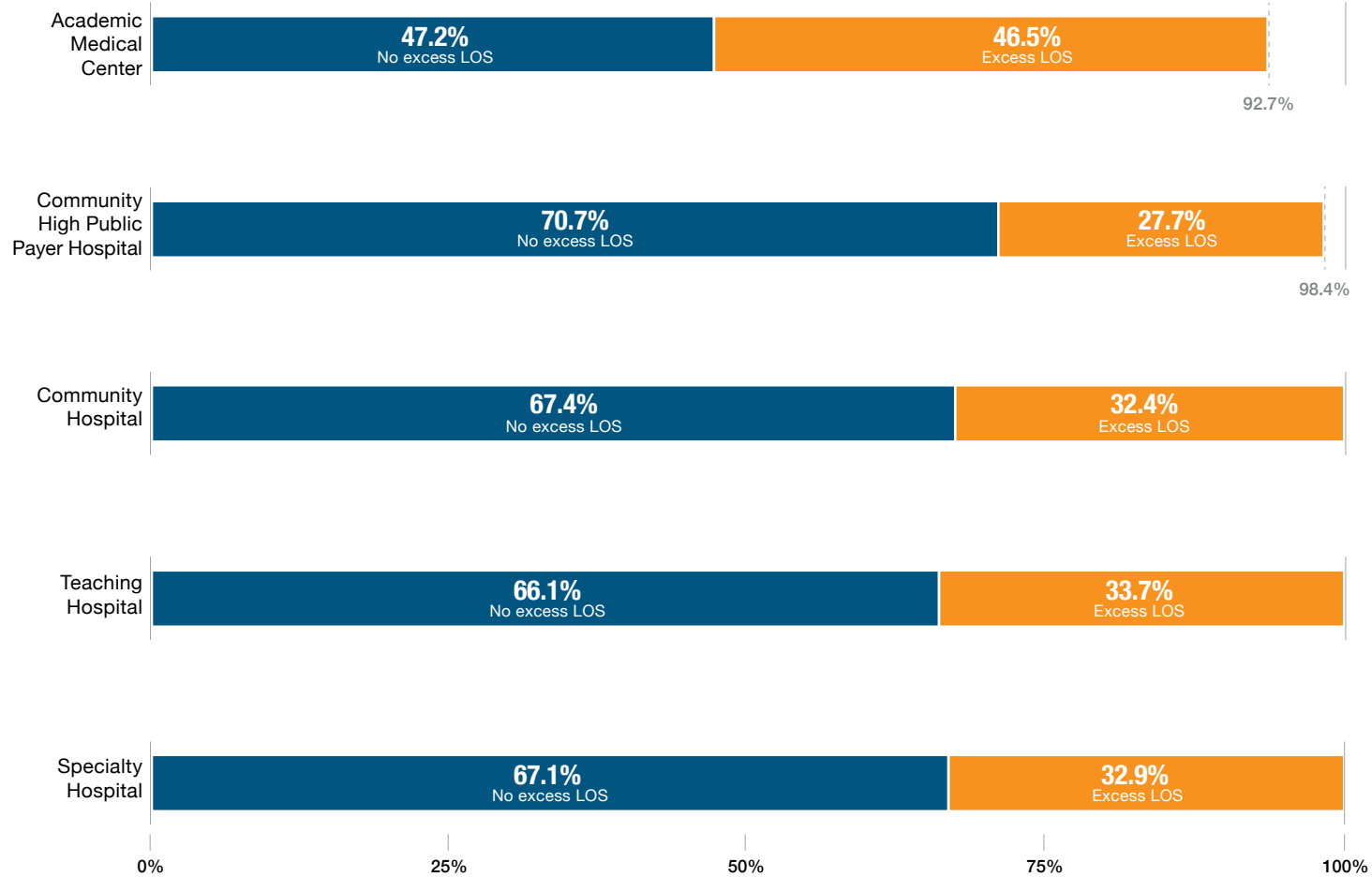
Treat-and-Release Visits: Visits with Excess Length of Stay, 2016-2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Estimates for excess length of stay exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

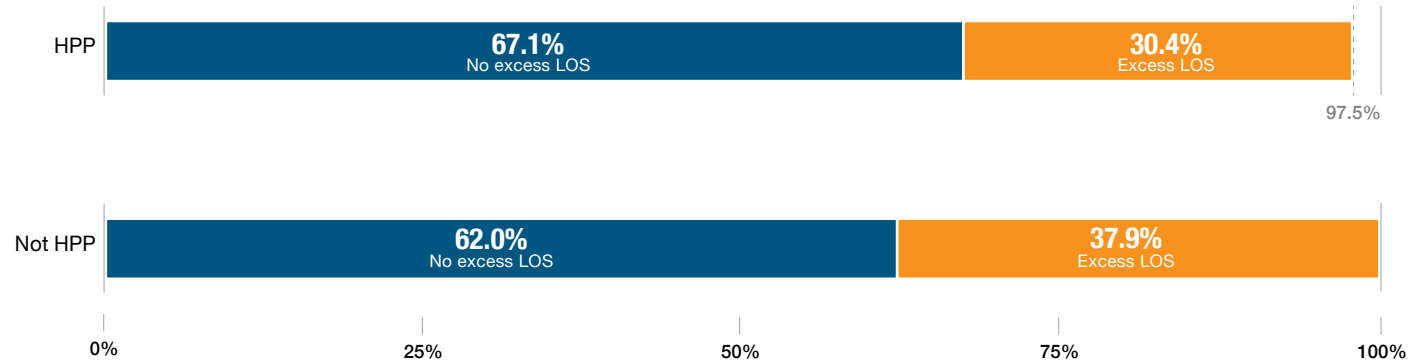
Treat-and-Release Visits: Excess Length of Stay by Hospital Cohort, 2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits: Excess Length of Stay by High Public Payer Status, 2019

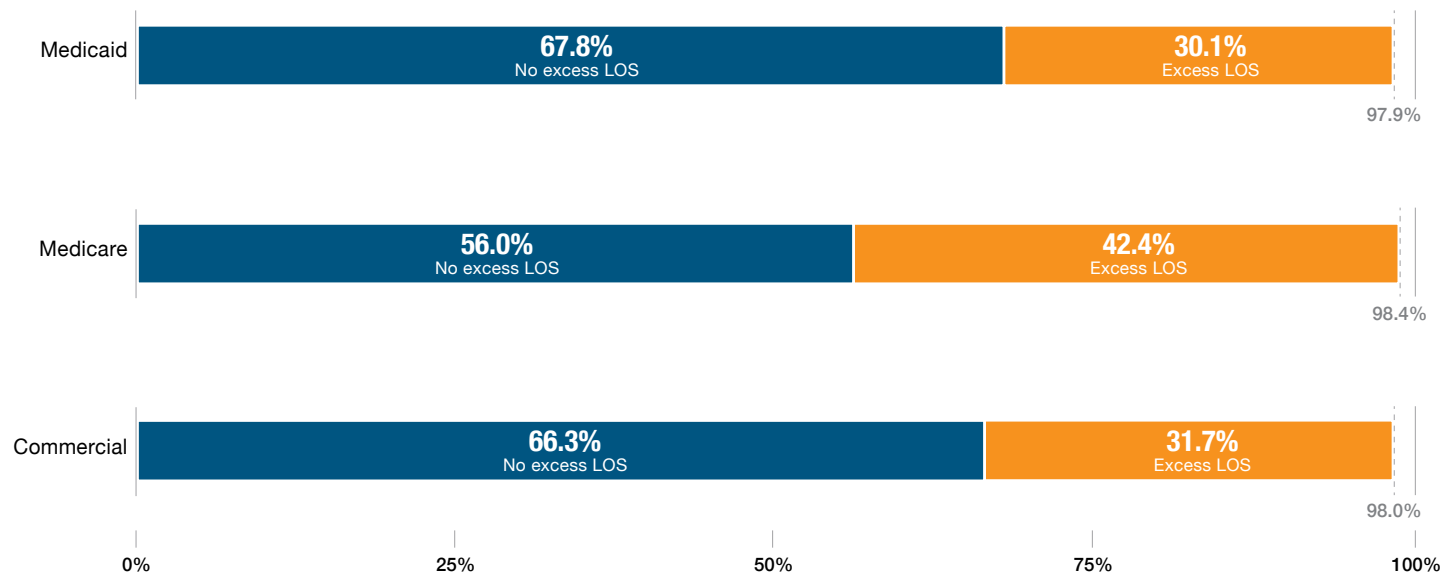


Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits:

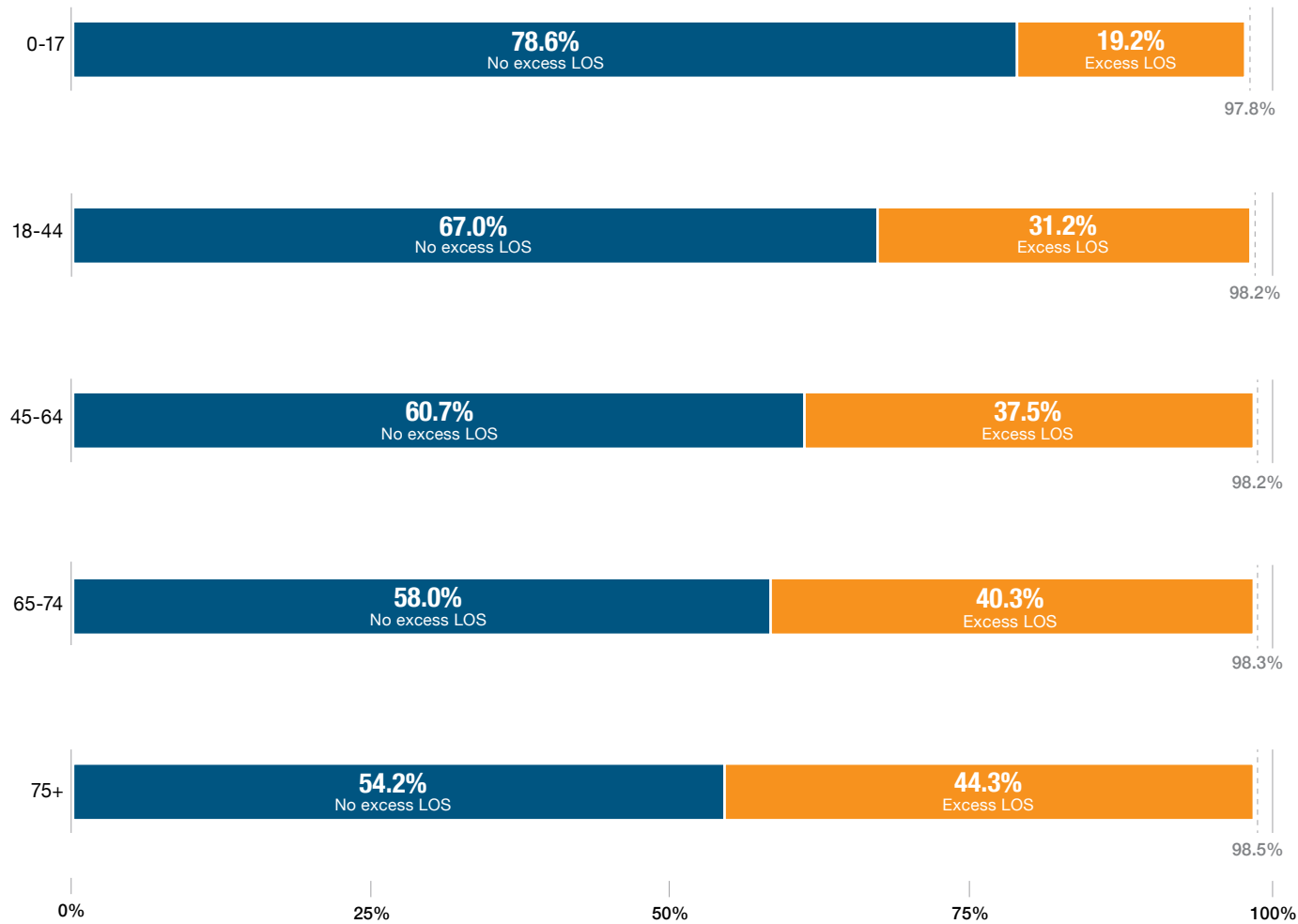
Excess Length of Stay by Expected Primary Payer Type, 2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

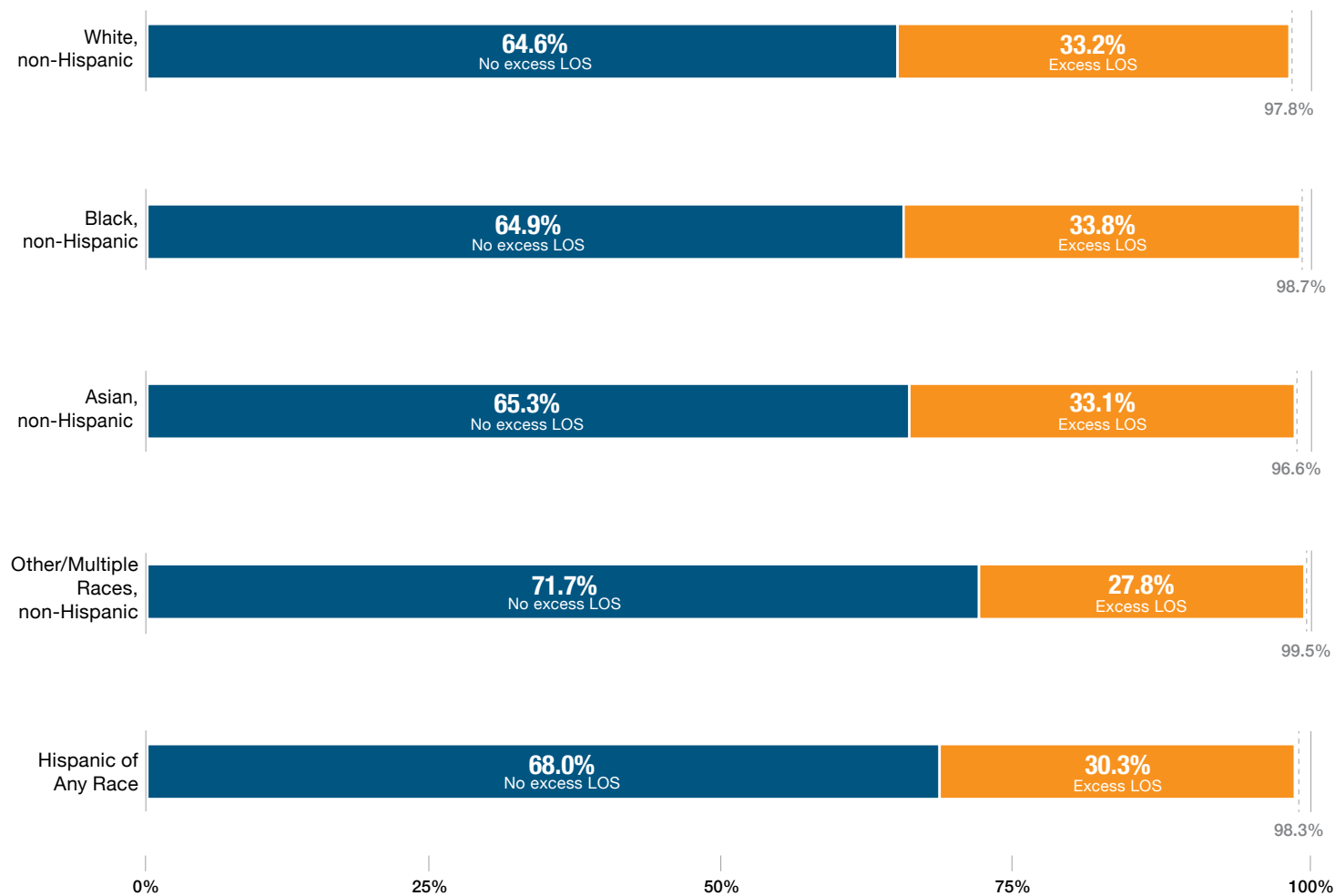
Treat-and-Release Visits: Excess Length of Stay by Age Group, 2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining excess LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

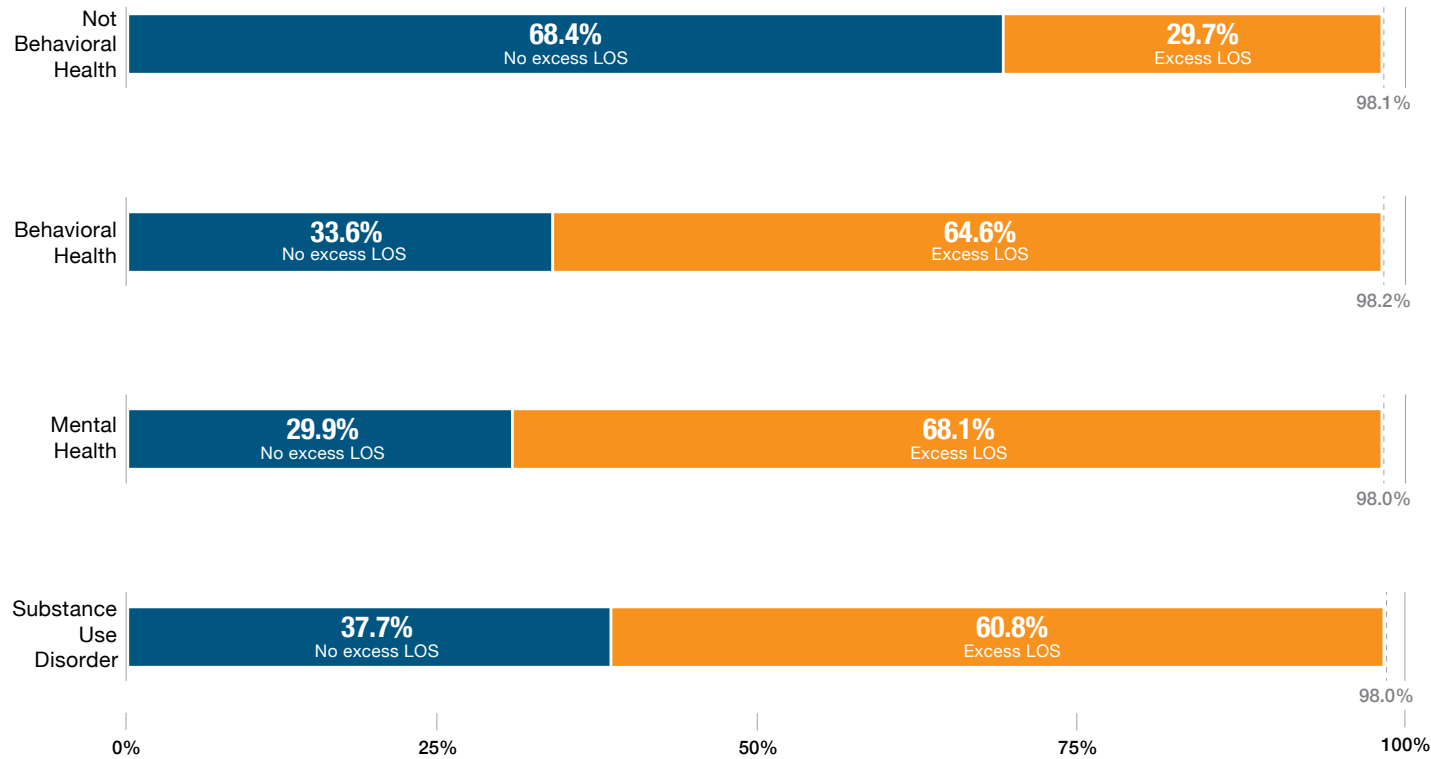
Treat-and-Release Visits: Excess Length of Stay by Race/Ethnicity, 2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information. More detailed race/ethnicity categories are available in the [databook](#) accompanying this report.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Treat-and-Release Visits: Excess Length of Stay by Behavioral Health Primary Diagnoses, 2019



Note: Excess length of stay (excess LOS) is a measure in which the length of stay (LOS) of treat-and-release visits exceeded 4 hours. It is calculated by subtracting 4 from the LOS of each treat-and-release visit. Visits with a remaining LOS greater than 0 were considered to have an excess LOS. Figures for excess length of stay may not sum to the total values because they exclude visits with missing or invalid data. The number of treat-and-release visits with missing length of stay due to missing or invalid arrival or departure date was 7,408 in FFY 2016, 5,136 in FFY 2017, 163,843 in FFY 2018, and 45,207 in FFY 2019. See [technical appendix](#) for more information.

Data source: Massachusetts Acute Hospital Case Mix Emergency Department Databases (EDD), FFY 2016-2019.

Notes

- 1** MassGIS, “MassGIS Data: Acute Care Hospitals,” date last modified December 2018, <https://www.mass.gov/info-details/massgis-data-acute-care-hospitals>.
- 2** See note 1.
- 3** See note 1.
- 4** U.S. Census Bureau, “ACS Demographic and Housing Estimates,” 2016-2018 *American Community Survey 5-Year Estimates* (Massachusetts), Explore Census Data, accessed December 4, 2020, <https://data.census.gov/cedsci/>.



For more information, please contact:

CENTER FOR HEALTH INFORMATION AND ANALYSIS

501 Boylston Street
Boston, MA 02116
(617) 701-8100

www.chiamass.gov
[@Mass_CHIA](https://twitter.com/Mass_CHIA)